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**To Buy Or Not To Buy?
A Behavioural Approach to Examine
Consumer Impulse Buying Choice
in Various Situations**

Jenny, Wei-Chen Ma

Thesis submitted in fulfillment of the requirements for the degree
of Doctor of Philosophy

Durham Business School

Durham University

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Abstract

Impulse buying is a phenomenon that has attracted attention from marketers and consumer researchers for decades. Whilst impulse buying has been studied extensively, there is a gap in our understanding of consumer impulse buying choice in different consumption situations. Impulse buying research lacks a theoretical and systematic approach in examining and integrating situational variables. This thesis aims to examine consumer impulse buying choice in various situations simultaneously through the identification of both external and individual determinants of impulse buying behaviour in each situation.

This thesis adopts the view of radical behaviourism and the behaviour perspective model (BPM). Radical behaviourism views impulse buying as a behavioural pattern shaped by its contingencies, and the BPM provides a theoretical model which generates the influences of both external and individual-related factors and investigates the interactions between the determinants of impulse buying from the pre-purchase to the post-purchase stage. The BPM matrix also provides a systematic framework to examine consumer impulse buying choice in various consumption situations.

A questionnaire was developed based on the BPM with a pre-study interview used as a complementary method. The survey collected data from 414 consumers in the UK and Taiwan. The results show that impulse buying behaviour is shaped by its contingencies and the ways in which the BPM components influence impulse buying behaviour vary significantly in different situations. The routine shopping situation and its utilitarian reinforcements trigger the highest rate of impulse buying choice. Secondly, the results demonstrate the interactions between the consumption situations and their corresponding individual-related factors, which illustrate the different types of impulse buying behavioural patterns. Thirdly, post-purchase regret was not necessarily found as the punishment that reduces impulse buying behaviour but an indicator of individuals' impulse buying patterns. Finally, individuals' cultural backgrounds were also found to predict different types of impulse buying patterns effectively.

As the first study to investigate consumer impulse buying choice in different situations, this study contributes to the literature by providing empirical evidence of situational influences and cultural differences. In addition, this study complements existing impulse buying knowledge by adopting a behavioural perspective. This research also offers managerial implications for international marketers and consumer policy makers on the ways in which impulse buying behaviour may be encouraged or controlled.

Keywords: Impulse Buying, Radical Behaviourism, BPM, Impulsivity, Situational Influences, Cultural Differences

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“For each new morning with its light,
For rest and shelter of the night,
For health and food,
For love and friends,
For everything Thy goodness sends.”

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Chapter 1 Introduction

Introduction

“Buy, buy, says the sign in the shop window; Why, why, says the junk in the yard.” Most of us can relate our shopping experiences to these words, written by Paul McCartney. That is why impulse buying behaviour has been a topic of interest for many decades, as impulse buying has become an integral part of consumer behaviour in our daily lives. Even after the recession hit the global economy in 2008, evidence showed that consumer impulse buying behaviour has not taken a downturn as expected. Since this specific consumer behaviour is not economically driven, when and why consumers make such a choice remain a topic of interest for marketers and consumer researchers.

“Behavior is the mirror in which everyone shows their image” (Johann Wolfgang von Goethe, cited by Ajzen, 1988). This study extends the concept of Goethe’s quote: not only is behaviour is the mirror in which everyone shows their image, it also reflects the image of an individual’s surroundings and the situation in which the behaviour occurs. As the situational influences on impulse buying behaviour remain relatively undiscovered, this thesis aims to examine both impulse buying individuals and impulse buying situations with the purpose of describing the whole picture of this behaviour to complement the existing impulse buying research. The emphasis on the situation is crucial, as the most consequential influences on consumers’ impulse buying are likely to emerge within a specific situation (Rook & Fisher, 1995). Therefore, it is critical to examine individuals’ characteristics as well as the situations in which they would make an impulse buying choice. To accomplish this goal, this study adopts the behaviourism perspective to illustrate impulse buying behaviour.

This chapter begins by stressing the significance of impulse buying behaviour and the reasons why impulse buying behaviour needs to be further understood by both marketers and consumers today. The chapter will then introduce impulse buying from its definition to its characteristics in the previous academic literature. Impulse buying can be defined as a buying choice made by consumers when they opt for an immediate

reward over a long-term reward in a consumption situation. This study argues that impulse buying behaviour results from interactions between various stimuli in different shopping situations and individual variables. In order to understand and explain impulse buying better, therefore, both individual and external factors should be investigated simultaneously.

Moreover, several knowledge gaps in the existing impulse buying research are revealed in this chapter. These include the fact that impulse buying behaviour has not yet been investigated in various consumer situations in one study at the same time, and there is a need for a model that is able to integrate the determinants of impulse buying and to examine this behaviour from the pre-purchase to the post-purchase stage. The research questions and objectives have been developed to address these knowledge gaps. In summary, this thesis aims to explore the situational influences that act upon on consumer impulse buying behaviour and to identify different types of impulse buying behavioural patterns; we plan to accomplish this by examining the interactions between the behaviour, the individual personality traits and the consumption situations. To address the research questions, this study will adopt the behavioural perspective to investigate impulse buying behaviour. This chapter will present the main theme of this study and offer readers a broad view of this thesis.

1-1 The Significance of Impulse Buying

Impulse buying has become one of the most common consumer behaviours in modern society, and consumer researchers have focused their interest on this topic for decades (Hausman, 2000; Vohs & Faber, 2007; Xiao & Nicholson, 2011; Xiao & Nicholson, 2012). Studies show that 38.7% of sales in department stores are bought on impulse (Bellenger et al, 1978), and 80% of consumers impulse buy at least occasionally (Welles, 1986; Abrahams, 1997). From grocery shopping to recreational shopping, the significance of impulse buying lies in the fact that it has become part of consumers' everyday activities. Impulse buying thus attracts attention from marketers and consumer researchers (Bayley & Nancarrow, 1998; Jones et al, 2003; Lee & Kacen, 2008). The complexity of impulse buying and its inconsistency with the rational choice models of traditional economics also encourage consumer researchers to continue investigating impulse buying (Dittmar et al, 1996; Wood, 1998; Silvera et al, 2008; Sharma et al, 2009; Xiao & Nicholson, 2012). Impulse buying remains not only an important trend in modern society but also a major topic in the field of consumer research (Dittmar, 1996; Vohs & Faber, 2007; Sharma et al, 2009).

After the recession hit the global economy in 2008, the Office for National Statistics (ONS) in the UK showed that consumer spending fell by 1.2% in the first three months of 2011 and that consumers spent less on housing, household goods and services. As impulse buying is believed to grow with an increase in individuals' disposable income (Dittmar, 2005; Park et al, 2006; Jeffery & Hodge, 2007), marketers and other economists seem to believe that "impulse buying is gone", since the decrease in disposable income should make consumers' buying behaviour more rational (see BBC News in the references). However, in Shoppercentric's survey of over 1,054 British adults in 2008, 74% of shoppers admitted to impulse buying groceries, while this figure rose to 76% in 2011. In fact, Shoppercentric's 2011 survey finds that not only did the impulse buying rate rise even after the recession, British consumers were also impulse shopping among more categories than recorded in the 2008 survey. This evidence surprisingly shows that whilst consumer recreational spending is believed to have slowed down, impulse buying behaviour is still growing. Consumers still engage

in impulse buying even when they have less spending power than before.

The recession has certainly had an effect on consumers. However, researchers have long argued that consumer behaviour is often irrational and economized (Holbrook & Hirshman, 1982; Cargill & Wendel, 1996; Elliot, 1997). Researchers argue that rational choice is generally satisfied in transparent situations and often violated in non-transparent ones (Tversky & Kahneman, 1986). For instance, most people would make efforts to undertake a rational search and choose the cheapest option when they are buying a pen, but when it comes to buying items with a higher value, such as a suit, most people would choose not to make the effort to search for a cheaper item, even if they could save as much money as in the pen purchase situation (Ariely, 2008). In which kind of situation would consumers make an impulse buying choice, and in which situation would consumers rather make a rational choice? Furthermore, which kinds of consumers would make such a choice in a specific situation? In summary, impulse buying behaviour is still an important topic even in the wake of the recession, and to understand further how consumers make such a choice, we must understand the situation in which this choice is made.

The further understanding of impulse buying behaviour and its situation may benefit both marketers and consumers. For marketers, finding a way to create an appropriate setting to encourage consumer impulse buying behaviour is vital for boosting sales figures. Such marketing strategies can be efficiently developed and improved if marketers have a thorough understanding of impulse buying behaviour (Bayley & Nancarrow, 1998; Crawford & Melewar, 2003; Xiao & Nicholson, 2011; Tifferet & Herstein, 2012). However, the questions concerning which kinds of consumption situations lead to more impulse buying behaviour and which kinds of settings are more effective for this specific situation remain unanswered.

For some consumers, impulse buying behaviour could become problematic and result in debts (O'Guinn & Faber, 1989; Wood, 1998; Vohs & Faber, 2007). A better understanding of impulse buying behaviour situations is also useful for consumers and

policy makers, as impulse buying behaviour could be controlled if individuals could recognize the types of situations in which they are more likely to engage in impulse buying behaviour. Moreover, a deeper insight into an individual's impulse buying patterns and his or her related impulsivity traits may help to identify different types of consumers and reveal the warning signs of problematic excessive buying behaviour.

To conclude, the significance of impulse buying has long been recognized and it still has a notable impact on our society, as it has undeniably become an integral part of consumer behaviour. Following the recession, while both marketers and consumers are eager to seek more effective solutions to impulse buying behaviour, impulse buying research can offer even more significant meaning at the present time. This research hopes to achieve the goal of providing a distinguishable and deeper insight into the study of impulse buying, especially regarding the situational influences on impulse buying behaviour.

1-2 The Definition of Impulse Buying

The definition of impulse buying is the main topic in the early impulse buying literature (1960s–1990s). However, there is still no unified definition of impulse buying that is recognized in both the commercial and the academic literature. For retailers, impulse buying is defined as any sort of unplanned buying (Clover, 1950; Stern, 1962; Abratt & Goodney, 1990). On the other hand, the definition of impulse buying in the academic literature is skewed more towards a consumer's point of view and focuses on describing the impulse buying experience. Moreover, impulse buying is defined in economic terms by illustrating how consumers weigh the pros and cons of a transaction.

Table 1 below shows the various definitions of impulse buying used by researchers. As scholars point out, since there is no universally accepted definition of impulse buying, research should establish a proper definition of impulse buying in order to clarify the type of consumer buying behaviour that is the target of a given study (Youn & Faber, 2000). In the following section, different definitions of impulse buying will be

reviewed systematically based on three distinct points of view: those of retailers, consumers and economists. Furthermore, the definition that is most suitable for this study will be identified.

Table 1: Definition of Impulse Buying

Author	Impulse Buying Definition
Clover (1950), Kollat and Willett (1967), Bellenger et al (1978), Adelaar et al (2003), Crawford and Melewar (2003)	Unplanned buying; any purchase made without advance planning before entering the store
D'Antoni and Shenson (1973)	Far more rapid than unplanned buying based on the impulsive behavioural response
Weinberg and Gottwald (1982)	Purchases with high emotional activation, low cognitive control and largely reactive behaviour
Rook (1987), also adopted by Rook and Fisher (1995), Sayre et al (1996), Beatty and Ferrell (1998), Zhou and Wang (2004)	When a consumer experiences a sudden, often powerful and persistent urge to buy something immediately
Piron (1991)	Unplanned buying with exposure to a stimulus, hedonically complex experience and “on-the-spot” (immediate time and place)
Hoch and Loewenstein (1991), also adopted by Vohs and Faber (2007)	A time-inconsistent buying choice – one that would not have been made if it had been contemplated from a removed, dispassionate perspective
Kacen and Lee (2002)	Unplanned buying with rapid decision making and a subjective bias in favour of immediate possession
Xiao and Nicholson (2012)	An unplanned and sudden buying act, in response to subjective or external stimuli, accompanied by a powerful and persistent urge; after the purchase, the customer experiences emotional, cognitive and/or behaviour reactions, which may become the new trigger of repeated IB; a reflection of impulsivity traits, sociocultural values and buying beliefs; both a process and an outcome.

1-2-1 Impulse buying definitions: Retailers' perspective

In the earlier literature, researchers adopt the point of view of marketers and retailers. From this perspective, which is more concerned with the items bought than with the consumers, impulse buying is seen as identical to “unplanned buying”, which means that the buying decision was made in-store (Stern, 1962; Kollet & Willet, 1967; Bellenger, 1978; Cobb & Hoyer, 1986; Abratt & Goodney, 1990). Based on this definition, Stern's (1962) work first identifies four types of impulse buying: reminder, suggestion, planned and pure impulse buying. Reminder impulse buying indicates that the store display reminds consumers to buy something that is not on their original shopping list, while suggestion impulse buying indicates that a consumer has no prior knowledge of the product but decides to purchase it after evaluating it in-store. Planned impulse buying indicates that a consumer enters a store expecting to purchase something that is on special offer. Finally, pure impulse buying, in Stern's work, is “truly impulsive” buying behaviour, referring to escapism or novelty buying, which breaks the normal buying behaviour pattern (Stern, 1962).

Stern's work reveals the possible types of in-store buying behaviour. However, reminder, suggestion and planned impulse buying do not appear to be far removed from normal buying behaviour. The main difference between these behaviours and normal planned purchase behaviour is having an actual shopping list before entering the store or using the store layout for an information search for the product. For example, a consumer may visit a supermarket to buy some milk, but then realize that he also needs butter after seeing butter displayed in the store, and so he purchases both items. In other words, although this consumer did engage in reminder impulse buying according to Stern's definition, we can see that this behaviour is far from “impulsive”, and that not all in-store decisions are impulsive (D'Antoni & Shenson, 1973; Weinberg & Gottwald, 1982). In summary, this definition may contribute to defining the types of products that may often be bought without prior planning and determining how to arrange a store as a reminder to encourage consumers to buy. However, scholars argue that the definition of unplanned buying is not sufficient to describe impulsive behaviour (Weinberg & Gottwald, 1982; Rook & Hoch, 1985).

1-2-2 Impulse buying definitions: Consumers' perspective

Weinberg and Gottwald (1982) state that the definition of impulse buying should be differentiated from that of unplanned buying. Their study observes consumers' emotional response and expression when they engage in impulse buying and suggests that the nature of impulse buying seems to be not only "unplanned" but also more emotional than normal planned purchasing. Although this study does not provide an actual definition of impulse buying, the focus of the investigation has clearly shifted from the original retailers' point of view to consumers' perspectives. After all, it is the consumers who experience the impulse, not the products (Rook & Hoch, 1985). Rook (1987) redefines impulse buying by describing the impulse buying experience of consumers: "when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately" (Rook, 1987:p.191).

The definition suggested by Rook (1987) distinguishes impulse buying from other unplanned buying behaviour, and it has been used in many impulse buying studies (Beatty & Ferrell, 1998; Hausman, 2000). The ways in which scholars describe impulse buying behaviour can also correspond to Rook's definition, including immediate time and place (Piron, 1991) or immediate possession (Kacen & Lee, 2007:Table 1).

Rook's definition describes the nature of impulse buying behaviour more accurately: an immediate response, a sudden activation or an act of impulsivity. Furthermore, it indicates that there are certain stimuli that trigger the purchase behaviour, leading consumers to make an impulse buying choice. Another contribution made by this definition is the emphasis on describing what consumers actually experience when they buy on impulse. In other words, Rook (1987) contributes to the portrayal of impulse buying behaviour from consumers' point of view, as seen in phrases such as "the powerful and persistent urge to buy". Therefore, this definition could be more helpful when it is presented to consumers, as it is more likely for consumers to relate their own experiences to this definition.

1-2-3 Impulse buying definitions: Economists' perspectives

The definition offered by Rook (1987) describes impulse buying from the perspective of consumer experience, and impulse buying is seen as a hedonistic complex experience (Piron, 1991). However, this definition focuses on the psychological state of consumers rather than describing their overt behaviour.

Rook (1987) states that impulse buying is a behaviour stemming from impulsiveness. Indeed, impulse buying is similar to other impulsive decisions that we make in our daily life. Consider food choices: many people always struggle to choose between eating healthy food and eating tasty food, or between eating sweets and keeping fit. Sometimes the presence of a pizza or chocolate cake can trigger their urge. Then they may struggle for a short while and still choose to indulge in a slice of pizza – even though they may know that in the long term it is not always the most beneficial option. Impulse buying is similar: we know that we probably do not need another pair of shoes and that we should save money for the future, or we know that if we wait longer the item's price might fall, but we just give in at that moment when the desired products are in front of us. At that moment, it is the immediate reward that appeals to us rather than the long-term benefits. Therefore, it is this description that interests economic scholars – the choice between immediate reward and long-term utility.

The concept of discounting, which is a trade-off favouring the immediately available rewards, has been applied by economists to the study of impulse buying. For example, a study shows that when people are offered the choice between receiving 50 USD now or 100 USD a year from now, most people will choose the immediate 50 USD. However, if the choice becomes 100 USD given 5 years later or 150 USD given 6 years later, the participants tend to prefer the 150 USD (Kirby, 1997). This is the effect of discounting. Similarly, Strotz (1955) suggests that impulse buying is a buying behaviour that appears when consumers discount the future too rapidly; that is, it means that the reward from buying the desired item at that moment outweighs the future issues of paying the money (Dittmar et al, 1995). Sharing this point of view, Hoch and Loewenstein (1991) further describe impulse buying as a behaviour with

“time-inconsistent preference”, as consumers appear to prefer the immediate outcome of impulse buying at the point of purchase.

Although there is no actual economic definition that is well accepted and commonly used in the impulse buying literature, the economic perspective on impulse buying clearly points out the cause of this behaviour – discounting the future. This viewpoint offers a more behavioural perspective on the definition, which can also be applied to other similar impulsive behaviours. This is a unique contribution in comparison with other definitions. Drug use, smoking and impulse buying share a characteristic – they are all behaviours that prefer immediate comfort or reward to long-term but more beneficial outcomes. For example, respondents in an impulse buying study reported the negative consequences of impulse buying, such as financial problems or dissatisfaction with the product (Rook, 1987).

This result may be explained by the nature of impulsivity: people sometimes make the choice of gaining an immediate reward and ignore the possibility of long-term benefit or later outcomes (Ainslie, 1975). Researchers have further found that such a choice (impulsive or not) needs to be estimated and investigated in different situations, as human subjects are found to prefer such immediate reinforcements only in certain situations (Ito & Nakamura, 1998). In which kinds of situations will consumers make the choice to buy on impulse, and which factors in these situations have effects on the impulse buying choice? These questions are thus crucial to understanding consumer impulse buying choice. This thesis therefore emphasizes the definition from the economics perspective while investigating and illustrating impulse buying behaviour, as it helps to address the questions proposed in this thesis.

To conclude, in line with Ainslie (1975), the definition of impulse buying behaviour in this study can be given as *when a consumer makes a purchase choice that provides an immediate reward rather than a delayed but more beneficial outcome within a particular consumption situation*. Based on this definition, the research objectives of this study can be identified: to identify the types of consumers who would make

impulse buying choices in certain situations and to discover the types of situations that would lead to more frequent impulse buying behaviour.

1-2-4 Characteristics of impulse buying

The definition of impulse buying shows that it is a buying behaviour that leads to immediate reward rather than a delayed but greater outcome; this is similar to other impulsive behaviours (Ainslie, 1975; Evenden, 1996; Evenden, 1999). The nature of “impulsiveness” in impulse buying behaviour first began to be revealed in Rook and his colleagues’ works. Rook and Hoch (1985) identify the characteristics of impulse buying in order to distinguish it from other purchase behaviours, including 1) a sudden and spontaneous desire to act, 2) psychological disequilibrium, 3) psychological conflict and struggle, 4) reduced cognitive evaluation and 5) lack of regard for the consequences. These characteristics also appear in the description of impulsivity in the psychiatric literature, which includes lack of planning, quick responding, tendency towards immediate gratification and poor inhibitory control (Evenden, 1999; Stoltenberg et al, 2008).

Moreover, “sudden” has become one of the key words to describe impulse buying behaviour. Impulse buying behaviour has been described as a sudden and spontaneous desire to act (Rook & Hoch, 1985) and a sudden urge to buy something (Rook, 1987; Bayley & Nancarrow, 1998). Consumers often make a purchase immediately in an impulse buying situation (Rook & Fisher, 1995). This key element of impulse buying may also indicate other aspects of this behaviour. Firstly, there must be something to trigger this “sudden urge” to buy. It may be a specific situation, or it may be something in the environment surrounding the consumer (Burroughs, 1996). For example, a consumer is very hungry on returning home from work for dinner, and the smell of a burger stand could trigger the consumer subsequently to buy on impulse. In other words, impulse buying behaviour happens when consumers are exposed to certain stimuli (Rook, 1987; Beatty & Ferrell, 1998), and these stimuli lead consumers to buy immediately (Verplanken & Herabadi, 2001). Moreover, the literature indicates that stimuli for impulse buying may be formed by *the interaction between both external*

factors and individual factors (Rook, 1987; Youn & Faber, 2000; Coley & Burgess, 2003; Dawson & Kim, 2009). For instance, researchers argue that impulse buying behaviour is the result of an interactive effect of both personality traits and environmental cues (Youn & Faber, 2000).

Secondly, the purchase decision is often made very quickly by consumers in an impulse buying situation. Unlike normal buying behaviour, in which the information relating to the product would be carefully searched for and evaluated by consumers, impulse buying behaviour is instead an act on the spur of the moment (Piron, 1991). Scholars thus state that impulse buyers use a rather shorter time of information processing to respond to the urge caused by stimuli; thus, the purchase decision is often made faster than other purchase behaviour (Burroughs, 1996). Researchers therefore further explain that this urge to buy is not only sudden, but also strong and compelling (Rook, 1987; Bayley & Nancarrow, 1998). It may be the reason why the purchase decision is made so quickly by consumers in the situation of impulse buying. The consumer choice in such situations is driven by *immediate possession* of the item (Rook & Gardner, 1993) – rather than a choice that incorporates other consequences, such as losing money or disobeying a diet plan.

Immediate reward may also be the reason why impulse buying has been reported by consumers as a thrilling experience in the moment (Rook, 1987). Impulse buying can be seen as serving a purpose of pleasure for consumers (Hausmann, 2000), and shopping has become a major leisure and lifestyle activity in modern society (Dittmar et al, 1996). In everyday life, we always have material desires and fulfilling these desires makes us happy. Desire is described as “wishes or urges to gain pleasure, satisfy a want, or engage in consummatory behavior” (cited by Ramanathan & Menon, 2006). Consumers may also feel satisfied with a planned purchase or other non-necessity buying behaviour, but for some consumers, impulse buying is an exciting and extraordinary experience. The emotional benefits that result from impulse buying have been reported in previous studies (Rook & Gardner, 1993; Sayre & Horne, 1996).

Another explanation suggested by scholars is that impulse buying may be a self-identity-seeking behaviour (Dittmar & Bond, 2010). This means that consumers buy on impulse because of the symbolic function of the good. Obtaining this good reflects their self-image, or it may even boost their self-image by turning them into someone that they “want to be”, a better self (Dittmar & Drury, 2000). However, this statement cannot explain other goods that consumers often buy on impulse, such as alcoholic drinks and sweets. Therefore, whether it is a self-expression product or simply a small item, the immediate reward should be the key reason why impulse buying is so appealing – *we obtain what we want immediately*. It is the immediate gratification that makes impulse buying even more fun and irresistible. Again, this facet of impulse buying corresponds to the economic definition of impulse buying as discussed in the previous definition section of this chapter.

In summary, the characteristics of impulse buying reveal the role of the antecedents to this behaviour – the stimuli that trigger consumers to engage in impulse buying behaviour. In an impulse buying situation, consumers experience a sudden, compelling urge because of the presence of a choice that offers an immediate reward. Therefore, the characteristics of impulse buying support the impulse buying definition from the economics perspective. Consumers buy on impulse, because they are confronted by the opportunity to achieve an immediate reward. The role of “immediate possession” further brings out the post-purchase characteristics of impulse buying, which are reported by consumers as emotional, thrilling, but regrettable (Rook, 1987; Dittmar et al, 1995; Hausman, 2000).

1-3 Previous Research into Impulse Buying

The early studies on impulse buying focus on the definition, to explain “what” impulse buying is. In subsequent work, researchers start to investigate “who” and “why”: what kinds of consumers engage in this behaviour and what are the possible reasons for their impulse buying? The existing impulse buying studies can thus be divided into two categories: studies examining individual-related factors and those investigating external factors of impulse buying behaviour.

1-3-1 The external factors of impulse buying

Impulse buying has been proven to be triggered by both environmental and situational factors. The relationships between impulse buying and environmental factors, such as physical surroundings, have long been investigated by consumer researchers (Donovan & Rossiter, 1982; Baker et al, 1992; Bell, 1999; Turley & Milliman, 2000; Xiao & Nicholson, 2012). Other factors, such as point-of-purchase signs, sales and sales personnel, are also suggested to be related to consumer impulse buying behaviour (Youn & Faber, 2000; Baumeister, 2002; Peck & Childers, 2006; Mattila & Wirtz, 2008). On the other hand, Crawford and Melewar (2003) investigate impulse buying behaviour in a specific environment – an airport. They provide several possible explanations for impulse buying at the airport, such as gift giving or disposal of foreign currency. Therefore, each individual consumer may have different impulse buying situations even in the same environment. A “situation” usually refers to a more specific given time and place than simply a physical environment (Belk, 1975). This example further shows us that the definition of a “situation” depends on an individual’s behaviour. Buying a gift for someone constitutes a different situation from trying to dispose of unused foreign currency.

The ways in which the previous literature illustrates impulse buying situations are varied and involve different types of factors, including environmental, social and temporal ones. For example, researchers have investigated impulse buying in several specific shopping environments, such as supermarkets (Kollat & Willet, 1967; Abratt & Goodney, 1990; Mai et al, 2003; Zhou & Wong, 2004), shopping malls (Weun et al, 1998; Phau & Lo, 2004) and airports (Crawford & Melewar, 2003). Temporal factors, such as the time and money available to a consumer (Beatty & Ferrell, 1998), special occasions, sales seasons and holidays (Youn & Faber, 2000) may also create different impulse buying situations for consumers. Additionally, social situations such as shopping with others (Luo, 2005) are proven to influence impulse buying behaviour. However, one knowledge gap in the literature is that impulse buying behaviour has not yet been investigated and compared across different situations simultaneously in one study. The reason for this gap may be that it is difficult for researchers to illustrate

various impulse buying situations systematically.

1-3-2 The individual factors of impulse buying

Researchers have also investigated the types of consumers who are more prone to engage in impulse buying behaviour. The most important contribution within this section of the literature is the development of the concept and the measurement of the *impulse buying tendency*. Researchers argue that the mechanisms that drive impulse buying behaviour should be seen as stable traits (Rook & Fishers, 1995; Beatty & Ferrell, 1998; Baumeister, 2002; Jones et al, 2003). Therefore, several studies have been conducted to develop and validate the impulse buying tendency (Rook & Fisher, 1995; Weun et al, 1998; Verplanken & Herabadi, 2001) as a type of individual trait that allows researchers to distinguish impulse buyers from other consumers. Moreover, the impulse buying tendency is often used as the dependent variable in impulse buying research, since the trait is assumed to represent impulse buying behaviour consistently (Kacen & Lee, 2002; Adelaar et al, 2003; Jones et al, 2003; Park & Lennon, 2006; Lin & Chen, 2012). For instance, the impulse buying tendency has been investigated in terms of its correlation with product involvement (Jones et al, 2003; Park et al, 2006), individual education (Wood, 1998), gender (Coley & Burgess, 2003; Sirowska, 2011) and cultural background (Kacen & Lee, 2002; Lee & Kacen, 2008).

Other individual differences studied in the previous literature are related to individual attitude. Rook and Fisher (1995) point out the role of individual attitude and its relation to impulse buying behaviour. They call it the “normative influence of impulse buying”, which means that if consumers view impulse buying as appropriate behaviour, it is more likely that they will buy on impulse. Impulse buying is also found to correlate positively with the materialism of a consumer (Mick, 1996), and impulse buying behaviour can be associated with individual self-image and symbolic consumption (Dittmar et al, 1995; Dittmar et al, 1996; Dittmar & Drury, 2000). These studies of the impulse buying tendency and individual attitude indicate that impulse buying behaviour is formed by individuals’ experiences.

Besides the impulse buying tendency, the previous literature has also made a significant contribution to other psychological mechanisms of impulse buying behaviour, and these mechanisms can be illustrated by individual personality traits. Verplanken and Herabadi (2001) suggest that individual differences in the impulse buying tendency are rooted in personality. Their research shows that both the cognitive and the affective facets of the impulse buying tendency can be related to personality dimensions, such as extraversion. This finding leads us to an interesting point: regardless of various demographic variables, such as gender or cultural background, some consumers are simply more impulsive than others because of their personality. The personality traits that may be related to impulsivity are therefore widely discussed in the impulse buying literature, including self-construal (Zhang & Shrum, 2009), self-esteem (Verplanken et al, 2005; Harmancioglu et al, 2009), variety-seeking (Sharma et al, 2009; Sharma et al, 2010; Punj, 2011) and depression (Sneath et al, 2009). Following these, Punj (2011) argues that biological factors, which are proven to be responsible for an impulsivity personality, should be further investigated by impulse buying researchers. In summary, this subsection of the literature shows that personality traits are the basic individual difference between non-impulsive buyers and impulsive buyers.

The previous literature concerning individual factors of impulse buying has made significant contributions to the studies of the impulse buying tendency and other psychological mechanisms, such as personality traits. However, this thesis argues that there are several knowledge gaps in the literature. First of all, the impulse buying tendency is often used as the dependent variable in impulse buying research (Dittmar et al, 1996; Omar & Kent, 2001; Kacen & Lee, 2002; Zhou & Wong, 2004; Park et al, 2006; Peck & Childers, 2006; Parboteeah et al, 2009; Sharma et al, 2010), rather than the actual impulse buying choice. However, a trait is not always a good predictor of overt behaviour (Epstein, 1983; Ajzen, 1991; Mischel & Mendoza-Denton, 2001). Second, the previous literature that relies on the impulse buying tendency also assumes that the *impulse buying tendency is consistent across various shopping situations* (Beatty & Ferrell, 1995; Jones et al, 2003; Park et al, 2006). The ways in which an

individual's impulse buying trait actually influences his or her impulse buying behaviour in different situations remains unclear, as the actual behaviour often depends on how people react to specific circumstances within a given context (Mischel, 1973, cited by Wells et al, 2011). In some situations, it might be more likely for consumers to engage in impulse buying behaviour; the degree to which the impulse buying tendency may lead to actual impulse buying behaviour across various situations needs to be investigated further (Rook & Fisher, 1995).

1-3-3 Issues in the existing impulse buying research

This summary of the previous literature on impulse buying has revealed several issues that need to be addressed further. The existing literature can be divided into two parts – the studies that investigate the external factors of impulse buying and those that investigate the individual factors of impulse buying. In other words, some studies focus solely on identifying the external antecedents of impulse buying, while some only investigate individual differences. However, impulse buying should result from the interaction of the individual's traits and the situation that the individual is in (Vohs & Faber, 2007; Lee & Kacen, 2008; Punj, 2011; Xiao & Nicholson, 2011). Therefore, both individual and external factors should be investigated at the same time in order to understand impulse buying behaviour as a whole (Youn & Faber, 2000; Punj, 2011). There is thus a need for an appropriate model to integrate the effects of both external and individual factors of impulse buying.

Several scholars have already recognized the importance of such a model (Beatty & Ferrell, 1998). However, most current models can only explain one facet or one type of impulse buying. For example, the fashion-orientated impulse buying model by Park et al (2006) focuses on impulse buying behaviour and its relationships with hedonic consumption tendency, fashion involvement and positive emotion. The impulse buying model proposed by Dittmar et al (1995), on the other hand, is developed in accordance with social construction theory, which explains impulse buying behaviour as the means of obtaining material possessions for self-completion. However, impulse buying is not only related to individuals' positive emotions but also to their negative moods (Rook &

Gardner, 1993; Tice & Bratslavsky, 2000; Vohs & Faber 2007), and not all impulse buying can be explained by social construction theory, since impulse buying behaviour is often found to be associated with grocery shopping (Kollet & Willet, 1967; Bellenger et al, 1978). It is therefore difficult to apply these models across all types of impulse buying behaviour. Furthermore, the model should be able to integrate and identify the external antecedents of impulse buying and to explain further the situation in which the impulse buying behaviour takes place.

Meanwhile, the previous literature shows that individual differences in impulse buying behaviour can be explained by personality traits (Rook, 1987; Youn & Faber, 2000; Verplanken & Herabadi, 2001; Jones et al, 2003; Sharma et al, 2010; Punj, 2011). According to Bem (1983), the scientific method for personality research is to “convert observations of particular persons behaving in particular ways in particular situations into assertions that certain kinds of persons will behave in certain kinds of ways in certain kinds of situations” (p.566). Therefore, in order to obtain a deeper insight into the individual differences in impulse buying, it is crucial to see impulse buying not just as a one-off behaviour but as a behavioural pattern that is formed by personality traits. This argument is supported by Verplanken and Herabadi (2001), who state that:

... impulse buying tendency, as a construct that is confined to the consumer behavior area, might thus be an expression of broader personality patterns. For instance, individuals who never plan and deliberate in areas such as work or leisure activities ... might thus be typical impulse buyers. (p.71)

Moreover, the ways in which this behavioural pattern can be found in different situations should be further investigated, so that the legitimate relationship between the individuals, their behavioural patterns and their situations can be illustrated. Verplanken and Herabadi (2001) further point out that the relations of the impulse buying tendency to the personality variables might imply the functional aspects of impulse buying, which means that different personality variables would lead to different aspects of impulse buying in various situations. Previous impulse buying

researchers have attempted to reveal this relationship by looking at personality traits and situational cues at the same time (Youn & Faber, 2000). However, since there are too many situational factors to account for, the consistency with which situations and personality traits interact has always been a difficult topic (Mischel & Mendoza-Denton, 2001). There is a need for a comprehensive model that can systematically map different types of situations, so that the relationships between impulse buying behaviour, personality traits and situations can be observed.

Finally, most previous studies focus on why or how impulse buying occurs, with little explanation of what happens to consumers after they buy on impulse. In other words, the post-purchase stage of impulse buying should also be discussed (Piron, 1991). Some qualitative data reveal that consumers report regret following impulse buying (e.g. Rook, 1987). However, impulse buying seems to be a continuous behavioural pattern for consumers. How the previous impulse buying experiences of consumers encourage or discourage them to buy on impulse thus needs to be investigated. A suitable model of impulse buying should be able to study impulse buying from the pre-purchase to the post-purchase stage.

To conclude, this section discusses various issues in the impulse buying literature. These include: 1) the assumption that the impulse buying tendency can reliably predict the actual behaviour across various situations; 2) the lack of explanation of the ways in which impulse buying can be a continuous behavioural pattern involving personality traits; 3) the lack of a theory that connects the behaviour and its relevant personality traits to the external environment and situations in which the behaviour can be located; and 4) the lack of investigation into the ways in which the post-purchase stage of impulse buying influences consumer behaviour.

1-4 Research Questions

This chapter began with a discussion of the definition of impulse buying behaviour. In this study, impulse buying behaviour is defined as “when consumers make a purchase choice that provides immediate reward, rather than a delayed but more beneficial

outcome, in a particular consumption situation”. This definition incorporates two crucial objectives of impulse buying research: to explore the kinds of consumption situation that will be more likely to lead to impulse buying choices and to investigate the types of consumers who are more likely to make impulse buying choices in a specific situation. Along with the knowledge gaps identified above, this study aims to explore the situational influences on consumer impulse buying behaviour, the consumer impulse buying pattern as a continuum and the ways in which individual traits can interact with different consumption situations and lead to impulse buying behaviour. Therefore, this thesis proposes the following research questions:

- 1) How do various consumer situations influence impulse buying behaviour?*
- 2) What types of impulse buying behaviour pattern can be identified?*

The first question may be answered by identifying the key determinants of impulse buying behaviour in a specific consumer situation. The second question may be answered by investigating the relationships between impulse buying behaviour and its corresponding personality traits and various situations.

1-5 Research Analytical Framework

1-5-1 Viewing impulse buying from the perspective of radical behaviourism

Most existing studies of impulse buying behaviour are based on a cognitive point of view. For example, cognitive researchers point out that the individual differences in impulsivity lie in individuals' different abilities to choose a pleasure-seeking goal or a self-regulatory goal (Puri, 1996; Shiv & Fedorikhin, 1999; Shiv & Fedorikhin, 2002). Baumeister (2002) thus argues that self-control failure is the cause of impulse buying. Therefore, the explanation for impulse buying behaviour through cognitive logic can be summed up as depending on an individual's internal "willpower". However, even the cognitive impulse buying research also suggests that the self-control ability of an individual can often be influenced by external factors (Shiv & Fedorikhin, 1999; Youn & Faber, 2000; Shiv & Fedorikhin, 2002; Vohs & Faber, 2007; Zhang & Shrum, 2009).

To address the research questions regarding the situational influences and behavioural patterns of impulse buying, this thesis adopts the view of radical behaviourism to explain impulse buying. Behaviourists focus on observable behaviour and its environment (Skinner, 1938, cited by Delprato & Midgley, 1992). Since this study seeks to investigate impulse buying behaviour and its situations and how the various situations influence impulse buying behaviour, it is promising to explain impulse buying behaviour from the perspective of behaviourism: that is, to seek the external explanation of such behaviour rather than looking at the individual's internal decision making. Skinner (1938) states that behaviour should be illustrated by the three-term contingency, which explains behaviour as a response to a discriminating stimulus that signals available reinforcement. From this perspective, impulse buying behaviour occurs under the control of contingencies: a behavioural choice that consumers make under the control of certain situations. The behavioural view of impulse buying is consistent with the argument that impulse buying is a continuous behavioural pattern, as individuals' impulse buying behaviour is maintained and reinforced by the contingencies. Furthermore, the behaviourists' concept of controlling behaviour could help this thesis to offer a practical contribution to marketers regarding how to create an appropriate setting for an impulse buying situation.

In summary, this study adopts the view of radical behaviourism to address its research questions. Since this study seeks to reveal the situational influences on impulse buying behaviour, the behavioural approach may help to reveal the external factors of impulse buying behaviour in a consumer situation. Furthermore, the behavioural view of impulse buying may illustrate how impulse buying behaviour is maintained as a behavioural pattern by its contingencies.

1-5-2 The application of the BPM

More specifically, the behavioural perspective model (Foxall, 1992; Foxall, 1997) is chosen as the theoretical model in this study. The BPM, developed based on Skinner's radical behaviourism, has been successfully applied to consumer research on a variety of topics, such as consumer brand choice (Foxall et al, 2004; Oliveria-Castro et al,

2011), food choice (Leek et al, 1998; Leek et al, 2000) and emotional response (Foxall, 1997; Foxall & Greenley, 1999). The BPM has also shown its ability to predict consumer choice reliably with the framework of radical behaviourism (Foxall, 2010).

The application of the BPM can also help to fill the knowledge gaps in the impulse buying literature. Firstly, the existing literature calls for an integrative model to examine the interaction of the external and the individual factors of impulse buying (Beatty & Ferrell, 1998). As the BPM explains consumer behaviour as the interaction between the consumer behaviour setting and the individual learning history, it is advantageous to use the BPM as the integrative model for the antecedents of impulse buying behaviour. Secondly, the BPM matrix has also provided a systematic and logical way to illustrate various consumption situations, based on the operant levels of consumer behaviour and the level of reinforcement in each situation. Therefore, the BPM can address the knowledge gap related to comparing impulse buying behaviour in different situations at the same time. Thirdly, radical behaviourism sets the behaviour itself as the subject matter. Unlike most previous studies, which have used the impulse buying tendency as the dependent variable, the BPM focuses on the actual consumer choice. Finally, the BPM is a model that can explain consumer behaviour in three stages: pre-purchase, purchase and post-purchase (Foxall, 1992); this may complement the knowledge gap regarding the lack of investigation into the post-purchase stage of impulse buying. To conclude, the points discussed above support the role of the BPM as the guiding analytical model for this study.

1-6 Research Objectives and Method of Inquiry

This study applies the behavioural view and the BPM to investigate the research questions “What are the effects of various consumer situations on impulse buying behaviour?” and “What types of impulse buying behaviour pattern can be identified?” Therefore, research objectives are identified to address the research questions. This study aims to identify the key determinants of impulse buying behaviour in a specific consumer situation and to investigate whether these factors can successfully predict the impulse buying choice in that situation. Moreover, the situation that is most effective

for impulse buying behaviour could be identified. It is crucial for this study to examine the relationships between impulse buying behaviour, its corresponding personality traits and its situations so that the different types of consumers who are more likely to make the impulse buying choice in a specific situation can be identified. In this way, this study seeks to illustrate different types of impulse buying behavioural patterns and the factors that may form these behavioural patterns.

This study is based on radical behaviourism and the BPM to develop the research instrument. After reviewing the literature, the key variables of this study were identified. The research methods in this study were designed to be suitable for both behavioural and impulse buying research. This study can thus be seen as consumer research close to applied behavioural analysis (ABA), which applies the principles and the theory of radical behaviourism to consumer impulse buying behaviour. Hence, this study aims to reach the goal of proving the functional relation between the behaviour and its variable as well as the generality of this relation across the human species. Although experimentation has been the preferred method of behaviourists, this study proposes to use a questionnaire as the research tool. Not only are the concepts of quantitative data and verbal behaviour (self-report) also widely accepted by behaviourists, the questionnaire survey is also an economical way to collect representable data with a limited time frame and resources. The procedures of this study thus include a pre-study interview and the main study consisting of a questionnaire survey. A pre-study was conducted to gain further understanding of the impulse buying literature and consumers' descriptions of their impulse buying experiences. Lastly, a questionnaire was used to collect cross-cultural data on impulse buying behaviour.

Conclusion

To summarize, this study investigates impulse buying behaviour from the behavioural perspective and with the application of the BPM, a radical behaviourist model of consumer choice. This chapter discusses the definitions and the characteristics of impulse buying, revealing that impulse buying behaviour is a consumer choice of

immediate reinforcement in a certain situation. The prior literature suggests that impulse buying is a behaviour resulting from interactions between varied stimuli in different shopping situations and individual variables. This study seeks to complement the impulse buying research by addressing the knowledge gaps regarding situational influences on impulse buying and seeing impulse buying as a continuous behavioural pattern. By revealing the situational influences on impulse buying behaviour and identifying different types of impulse buying behavioural patterns, this study intends to make contributions in both practical and theoretical ways. The potential practical contribution is to identify the most effective impulse buying situation and setting through the view of behaviourism and the application of the BPM matrix. The intended theoretical contribution is to offer the existing literature a behavioural perspective of impulse buying behaviour: more specifically, to explore the situational influences on consumers' actual impulse buying choice, to reveal impulse buying as a behavioural pattern linked to consumer previous shopping experiences and impulsivity traits and to integrate the effect of behavioural antecedences and consequences on impulse buying behaviour.

The structure of this thesis is as follows. In Chapter 2, a discussion of impulse buying behaviour from the perspective of behaviourism is provided. An overview of the BPM and how each component of the BPM can be applied in the context of impulse buying is also presented. The study propositions of this thesis are developed and presented at the end of this chapter. Chapter 3 introduces the philosophy of science from the viewpoint of radical behaviourism and the rationales behind the research methodology of this thesis, followed by the details of the research design and approach. Chapter 4 provides details of the data analysis in this study, including the procedures and the results of each study proposition test. Finally, Chapter 5 presents a general discussion regarding the research findings, contributions, implications and limitations.

Chapter 2 Literature Review

Introduction

The purpose of this research is to illustrate impulse buying behaviour from a behavioural perspective, and specifically to extend our understanding of situational influences on impulse buying behaviour. The previous chapter introduced the background of the existing impulse buying research and the knowledge gaps in the impulse buying literature. In summary, two main research questions have been developed regarding these knowledge gaps. This study intends to address the question of “How do various consumer situations influence impulse buying behaviour?” by identifying the key determinants of impulse buying behaviour in several specific consumer situations. This study also intends to approach the question of “What types of impulse buying behavioural pattern can be identified?” by investigating the relationships between impulse buying behaviour, its corresponding personality traits and various situations.

This thesis intends to address these research questions by applying the theory of radical behaviourism and the BPM to investigate impulse buying behaviour. Instead of looking at impulse buying as a “tendency” that may be related to other factors, this thesis seeks to explain impulse buying as a behaviour occurring under the control of contingencies, a behavioural choice that consumers make under the influence of certain situations. The aim of this chapter is to illustrate impulse buying from the perspective of radical behaviourism and to explain how each component of the BPM may play a role in a consumer’s impulse buying choice. This could help not only to confirm the interpreting power of the BPM over impulse buying behaviour, but also, more importantly, to generate and identify the key factors of impulse buying behaviour. More specifically, this thesis proposes the BPM matrix, which classifies eight consumer situations, as an efficient tool to examine impulse buying behaviour systematically in various situations. This is especially significant, as impulse buying behaviour has not yet been studied in different situations simultaneously (Jones et al, 2003). This chapter will also reveal other potential contributions of this study to the impulse buying research. By examining impulse buying situations and their post-purchase consequences, the likely

impulse buying behavioural pattern of individuals may be identified. Furthermore, in order to gain a deeper insight into this behavioural pattern in social environments, this study intends to complement the impulse buying research by adding more cross-cultural evidence, so that this behaviour may be explained not only on an individual level but also within the scope of cultural backgrounds.

The contents of this chapter begin with the argument that since impulse buying should be examined as an actual behavioural choice rather than a tendency, it should be seen as a behaviour in the view of behaviourism – a response given by an organism in response to its environment. Next, the general background of behaviourism will be introduced, so that the fundamental concept of the BPM can be illustrated. The main body of this chapter will reveal the details of the BPM components and their application to impulse buying behaviour in this study. The rationales and significance of examining cross-cultural impulse buying behaviour will also be introduced. Finally, the developed study propositions of this thesis will be presented at the end of this chapter, indicating the direction we intend to take with this research.

2 Impulse Buying and Behaviourism

Most research into impulse buying has used a cognitive perspective to investigate this behaviour, such as motivations (Dittmar & Drury, 2000; Hausman, 2000), information processes (Burroughs, 1996) and self-control (Baumeister, 2002; Hofmann et al, 2008; Sultan et al, 2011). However, there seems to be a lack of discussion of impulse buying in another leading domain in the field of psychology: behaviourism. In comparison with cognitive psychologists, behaviourists focus on observable behaviour and its interaction with a certain environment. The behavioural analysis of a behaviour can therefore highlight the effect of the determinants of a behaviour, whilst other cognitive approaches, for instance, the theory of reasoned action (TRA) and the theory of planned behaviour (TPB), explain the pre-behaviour factors, such as intention (Ajzen, 1991). Such an approach has attracted criticism from other scholars, including that the TPB and TRA cannot provide a solid explanation for the determinants of a behaviour

and its operational components (Conner & Armitage, 1998; Pedersen, 2005). Also, scholars argue that the TPB and TRA should further take into account the influence of culture and society on behaviour (Armitage et al, 1999).

This study seeks to investigate impulse buying behaviour and its situations and how various consumption situations may influence impulse buying behaviour; it therefore seems promising to explain impulse buying behaviour from the viewpoint of behaviourism. Ajzen (1999) states that if the intention could predict the actual behaviour, it would vary across situations. However, cognitive theories such as the TPB and TRA offer a limited explanation for situations, since their focus is on pre-behaviour intention. This thesis thus attempts to examine impulse buying behaviour from the behavioural perspective and to seek an external explanation for such behaviour rather than the individual internal decision making. The ways in which behaviourism can contribute to the study of impulse buying and the chosen BPM model will be introduced later in this chapter. Since it is the present author's position to apply the perspective of behaviourism to impulse buying, impulse buying must first be examined as a behaviour.

2-1 Impulse Buying as a Behaviour

The previous literature on impulse buying has provided several definitions of impulse buying. As these previous studies have contributed greatly to descriptions of the characteristics of impulse buying, this thesis proposes to view impulse buying from the behavioural perspective, in order to gain a further, alternative insight. The first point of this thesis is to see impulse buying as a behaviour in itself from the behavioural view. In the prior impulse buying literature, scholars point out that impulse buying is an impulsive behaviour (Rook, 1987; Punj, 2011). Therefore, we could also view impulse buying as any other human behaviour, such as smoking or gambling – a choice that human beings make when they are in certain situations.

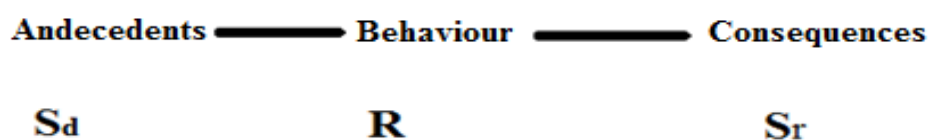
What is behaviour? Skinner describes behaviour as “what an organism is doing that we can determine by observing its relation with its environment” and “the action upon the

outside world” (Skinner, 1938, cited by Delprato & Midgley, 1992). Other behaviourists also define behaviour as “any change of an entity with respect to its surrounding” (Rosenblueth et al, 1943). According to this definition, a single behaviour can be seen as an observable response of an organism to its surrounding stimuli. Besides external stimuli, other influences that would cause an organism’s behavioural response are the consequences of previous behaviours. As we learn from our previous experience, our behavioural responses are shaped through reinforcement or punishment (Skinner, 1938; Skinner, 1953). A behaviour can thus be represented by the three-term contingency proposed by Skinner (1938; Skinner, 1969), which consists of stimuli, behavioural responses and consequences. As Skinner writes:

An adequate formulation of the interaction between an organism and its environment must always specify three things: 1) the occasion upon which a response occurs, 2) the response itself, and 3) the reinforcing consequences. The interrelationships among them are the contingencies of reinforcement. (Skinner, 1969:p.7)

The paradigm of Skinner’s three-term contingency is presented as “Sd-R-Sr”. Here, Sr represents the function of the reinforcing stimulus, which is contingent on the behavioural response (R). The discriminating stimulus (Sd) is the setting condition in which the response has previously been reinforced, and which signals the available reinforcement in the future. This view of behaviour explains behaviour in terms of individuals’ interactions with their current environment rather than individuals’ intention or motivation.

Figure 1: Three-Term Contingency



Furthermore, in this definition of behaviour, behaviour is dynamic – it can be changed or maintained over time by the contingencies. Impulse buying, as with other human behaviours, is a behavioural response of consumers when they face certain stimuli within an environment. The previous impulse buying literature has also mentioned the role of stimuli. Weinberg and Gottwald (1982) argue that impulse buying is a reactive behaviour when consumers face stimuli. Their research also shows that impulse buyers have more emotional expression than non-buyers when confronted by such stimuli. Rook (1987) further argues that impulse buying is simply an impulsive behaviour and that the buying impulse can be triggered by exposure to a product or other stimuli. Scholars thus agree that the impulse buying urge is caused by certain stimuli, such as a product or store promotion (Rook, 1987; Beatty & Ferrell, 1998; Youn & Faber, 2000). However, this view is quite different from the view of radical behaviourism.

In the view of radical behaviourism, the role of stimuli as described in the previous literature cannot be held solely accountable for impulse buying behaviour. Rather, the extent of the ways in which stimuli control this behaviour depends upon the individual reinforcement history (Foxall, 1987). In other words, according to radical behaviourism, the meaning of or the explanation for a behaviour is generated by an individual's history of exposure to similar contingencies that have brought this behaviour under the control of the current situation (Foxall, 1998). Therefore, to understand impulse buying behaviour and its situations from the perspective of radical behaviourism, its consequences must be examined, as they form part of the reinforcement history of an individual's impulse buying behaviour and define how stimuli control this behaviour.

Consequences follow impulse buying behaviour. Consumer researchers have already recognized that evaluating the utility of both the possession and the transaction itself influences consumer behaviour (Thaler, 1999). The purchase itself can be seen as a gain or a loss (Tversky & Kahneman, 1981). The positive consequences of impulse buying behaviour may be the immediate possession of the item (Rook & Gardner, 1993) or the emotional satisfaction of increasing one's self-image (Dittmar & Drury, 2000).

On the other hand, the negative consequences may include loss of money or dissatisfaction with the item afterwards (Rook, 1987; Dittmar et al, 1995).

In summary, based on the previous academic literature, this thesis argues that impulse buying behaviour can be explained in the view of radical behaviourism and the three-term contingency. It is a behavioural response to certain stimuli provided by the current environment and followed by certain consequences.

Impulsive behaviour is in all of us

What kind of behaviour is impulse buying? In the previous section, it is mentioned that behaviourists such as Skinner (1953; Skinner, 1974) state that a behaviour is the response of an organism to its current environment and is shaped by post-behavioural reinforcement or punishment. Moreover, in laboratory experiments with animals, behaviourists have found that the way in which the reinforcement is delivered can also alter the behavioural response. Researchers have determined that a delay in reinforcement, as well as the frequency or the amount of reinforcement, also has an effect on an organism's behavioural response (Chung & Herrnstein, 1967). For instance, researchers have found that when immediate reinforcement and delayed punishment are imminent, it is the immediate reinforcement that acts as the effective stimulus to the behavioural response (Epstein, 1984). The evidence of such effects have been found with regard to both animal and human subjects, which further suggests that there is an evolutionary and a biological root for such behaviour (Acton, 2003).

The impulsivity literature also suggests that impulsivity has its biological roots in individuals (Eveden, 1999), and that such a biological basis could be the foundation for individual differences in impulse buying (Verplanken & Santos, 2011). For instance, Gray (1975; Gray, 1987) proposes two central nervous systems in the brain: the behavioural activation system (BAS) and the behavioural inhibition system (BIS). The BAS responds to appetitive stimuli such as reinforcement, whilst the BIS responds to aversive stimuli such as punishment. Hence, individuals who have a high BAS could

be classified as impulsive individuals, and people who have a high BIS are regarded as anxious individuals (Gray, 1975; Corr et al, 1995).

The BAS, the system that represents impulsivity, has been found to be positively related to impulse buying behaviour (Ramanathan & Menon, 2006, cited by Verplanken & Sato, 2011). As the BAS is believed to “initiate exploratory, approach behavior that brings the organism closer to final biological reinforcers” (Corr et al, 1995:p.48), it is not difficult to understand why most of us have experiences of impulse buying. Not only is such impulsive behaviour performed under the effect of immediate reinforcement, but such an effect is also part of the biological make-up existing in every one of us. Furthermore, it provides the fundamental basis for individual differences in impulsivity and impulse buying (Gray, 1987; Verplanken & Herabadi, 2001; Verplanken & Sato, 2011).

Immediate reinforcement as the source of impulsive behaviour

The main characteristics of impulsive behaviour were previously discussed in this thesis: it is biologically rooted and occurs when impulsive individuals are confronted by immediate reinforcement. The concept of how an immediate reward influences human choice has also been discussed by economic researchers. For instance, the discounted utility model suggests that consumers do not always act to maximize the total utility outcome, and that the total value of a utility decreases with every increase in delay (Samuelson, 1937, cited by Read, 2003). Read and Leeuwen (1998) find that consumers choose in favour of long-term benefits if the choice is made in advance. On the contrary, if the choice is made in the moment, long-term benefits seem less valuable. In their study, most people chose healthy fruit over unhealthy snacks when asked a week in advance; however, at the appointed time, more people chose the unhealthy snacks immediately.

Hence, in terms of behavioural explanations, impulsiveness is defined as *when a response producing small, immediate reinforcement is preferred over the one that produces large, delayed reinforcement* (Ainslie, 1975; Solnick et al, 1980). Therefore,

impulsive behaviour is represented by the choice to smoke now even though you know that it is harmful to your health in the long term, or the choice to eat the chocolate cake in front of you even though it will ruin your diet plan. The same applies to impulse buying: impulse buying behaviour is a buying behaviour in a situation when the immediate consumption is preferred over other buying behaviour that might produce a better but delayed outcome, such as buying after carefully planning and comparing all the relevant information (Hoch & Loewenstein, 1991; Rook & Gardner, 1993). In Chapter 1, this thesis argued that the definition of impulse buying in economic terms is preferred in this thesis. This is because the nature and the cause of impulse buying behaviour can be better revealed with this type of definition, as discussed above.

The behaviours of this sort highlight the important role of “immediate reinforcement”. If the pleasure or the nicotine effect was not received immediately by smokers, maybe the impulse to smoke would not be so strong. If the high of using drugs came weeks later rather than immediately, it is unlikely that drug users would become addicted (Monterosso & Ainslie, 2007). In other words, people who engage in impulsive behaviours fall into the trap of immediate reinforcement (Baum, 2005). Take impulse buying as an example: it is not only the immediate possession that can act as the reinforcement, but also the hedonistic thrill and satisfaction of buying.

For example, when consumers impulse buy online, they will not receive the items they buy right away. However, when they press the “buy” button on the screen, the immediate emotional satisfaction from the purchase delivers another type of immediate reinforcement. Evidence has shown that consumers who buy on impulse online report that they are doing something fun and exciting (Madhavaram & Laverie, 2004). Therefore, impulse buying is not only a behaviour in response to stimuli, but also an impulsive behaviour that produces immediate reinforcement rather than greater but delayed reinforcement.

Impulse buying as a continued behaviour

According to the three-term contingency, consequences shape behavioural responses.

These responses can be strengthened, maintained or decreased. In other words, the consequences are responsible for the future occurrence of the specific behavioural response. When a particular response is reinforced, this response is more likely to occur again and again in a similar situation. Thus, these reinforced and recurring behavioural responses create a continuous chain of behaviour – a behavioural pattern.

Behaviourists argue that to say someone is a smoker is to say that someone smokes *frequently*, i.e. that the pattern of his/her daily life activities includes smoking (Baum, 2005). Impulse buying researchers also suggest that impulsive buying is a continuous process (Dittmar et al, 1995; Dittmar et al, 1996; Dittmar & Drury, 2000; Xiao & Nicholson, 2011; Xiao & Nicholson, 2012). For example, consumers who buy on impulse in a supermarket during their weekly routine shopping trip are unlikely to buy on impulse only once then never again. Instead, every time they are in the supermarket for routine shopping and every time they see the offers in-store, they may buy something on impulse again, as they did before. In other words, once consumers have become impulse buyers, they impulse buy frequently, as impulse buying has become a behavioural pattern in their daily life. For instance, Bayley and Nancarrow (1998) report that some consumers describe impulse buying behaviour as a constant and significant part of their shopping behaviours, including repeated discretionary purchases such as routine shopping.

In fact, those consumers who normally buy on impulse are also likely to have similar behavioural patterns in other aspects of their lives (Verplanken & Herabadi, 2001). Baumeister (2002) proposes individual self-control as a trait, arguing that individuals who have less self-control exhibit this trait in multiple behaviours, such as drinking and spending money. The famous Stanford Marshmallow Experiment (Mischel, 1973) and its follow-up studies could illustrate this point. The researchers gave marshmallows to children and asked the children if they could wait for fifteen minutes before eating them. The children who passed the test by delaying their gratification (i.e. not eating the marshmallow right away) performed better in many aspects when they grew up than the children who were unable to delay their gratification (Shoda et al,

1990). This may provide evidence that impulsivity or the ability to delay gratification can be a type of behavioural pattern, which in turn forms a personality trait. Impulse buyers, who are defined as being unable to delay the gratification of shopping, may therefore indulge in other behaviours that relate to gratification in short-term pleasure. For example, impulse buying behaviour has been found to be strongly related to unhealthy snacking (Verplanken et al, 2005).

Hence, another contribution provided by seeing impulse buying behaviour as a behavioural pattern is to argue that this behaviour should be examined as a *pattern of response over time*, rather than as isolated actions. Natarajaa and Goff (1991) argue that consumer purchase behaviour should be seen as a continuous pattern characterized by consumer self-control: this continuum could include normal impulsive buyers (Weun et al, 1998) to the extreme form such as compulsive buyers (Dittmar et al, 1995; Dittmar et al, 1996; LaRose & Eastin, 2002; Xiao & Nicholson, 2011; Xiao & Nicholson, 2012).

Impulse buying as an individual trait

Previous impulse buying researchers also see impulse buying as a personality trait. Personality has been referred to as an “individual’s distinctive and enduring characteristics, including stable patterns of thoughts, feelings, emotions, and behavioral tendencies” (Mischel & Mendoza-Denton, 2001). The impulse buying tendency (IB tendency) is therefore often used as the key dependent variable in the previous literature (e.g., Rook & Fisher, 1995; Beatty & Ferrell, 1998; Hausman, 2000; Vohs & Faber, 2007). Meanwhile, while most researchers agree that the IB tendency is a strong indicator of impulse buying behaviour, the elements that actually form the IB tendency continue to be discussed in the literature without a definite answer. For example, Youn and Faber (2000) examine impulse buying with the Multidimensional Personality Questionnaire developed by Tellegen (1982). Three out of eleven personality dimensions – lack of control, stress reaction and absorption – are found to be related to impulse buying behaviour. This result suggests that various personality traits could lead to the IB tendency.

Thus, personality traits have been a topic of interest in impulse buying studies of individual differences (e.g. see Youn & Faber, 2000; Verplanken & Herabadi, 2001; Shama et al, 2009). Previous findings indicate that some consumers are simply more impulsive than others because of their personality (Verplanken & Herabadi, 2001). Verplanken and Herabadi (2001) argue that the impulse buying tendency can be seen as an expression of broader personality patterns, and someone who always acts before thinking may also adopt such a behavioural pattern while shopping.

In summary, the ways in which personality traits relate to impulse buying behaviour have been examined frequently in the past, so why can the view of radical behaviourism make a difference? In the view of behaviourists, personality traits are formed by established behavioural patterns that are developed through contingency (Ozman & Crave, 1992). In other words, if we are able to detect the observable behavioural pattern of an individual, we should also be able to find certain corresponding personality traits and the contingencies to that behavioural pattern. Previous researchers have contributed by pointing out the personality traits that are related to impulse buying behaviour and that individuals' behavioural pattern can be found in their personality (Verplanken & Herabadi, 2001). In the view of behaviourism, it is not only the link between personality traits and impulse buying behaviour that should be identified, but also the contingency under which this pattern of behaviour is found to occur.

This view could expand the explanation of personality traits and behaviour to external factors, such as *a specific situation in which the pattern of behaviour is most frequently found* (Mischel, 1973; Digman, 1990). Furthermore, as discussed before, the personality trait that leads to impulse buying, such as impulsivity, has been argued to have an evolutionary biological root. How this trait has been developed by evolutionary forces has also emphasized the role of environmental contingencies in the formation and preservation of these behaviour patterns (Foxall, 2010). The theoretical framework of radical behaviourism and the BPM may therefore serve to integrate and identify these contingencies of this evolved trait.

The significance of seeing impulse buying as a behavioural pattern

To conclude, the starting point of this research is to emphasize impulse buying as a behaviour, a behaviour triggered by immediate reinforcement and ignoring any delayed outcomes. Moreover, impulse buying behaviour can be seen as a behavioural pattern, the pattern of impulsive choice controlled by a certain network of contingencies. Consumers who buy on impulse may also exhibit other impulsive behaviour in other similar situations (Verplanken & Herabadi, 2001; Verplanken et al, 2005). Gradually, this pattern may represent a continuum of consumer behaviour from normal buying behaviour to the extreme form, such as compulsive buying or addiction (Dittmar et al, 1995; Dittmar et al, 1996; Dittmar & Drury, 2000; LaRose & Eastin, 2002; Foxall, 2010b; Xiao & Nicholson, 2011). In fact, Foxall (2010b:p.340) suggests that “over the continuum of consumer choice, impulsivity and self-control are apparent in varying combinations in the various modes of consumer behavior from the routine to the extreme”.

The impulsivity trait is always present in us, but sometimes we act on impulse, and sometimes we do not; some individuals make more impulsive choices than others (Verplanken & Herabadi, 2001; Verplanken & Satos, 2011). Hence, to see impulse buying as a behavioural pattern provides firstly a theoretical supportive link between the impulse buying behaviour and the personality traits of consumers. This link has already been considered as one of the main individual factors that lead to impulse buying in the previous literature (Youn & Faber, 2000; Verplanken & Herabidi, 2001). Indeed, impulse buying is an impulsive behaviour committed by impulsive individuals (Rook & Fisher, 1995; Jones et al, 2003). It is not only these individual differences that should be identified; more importantly, the difference facets of impulsivity traits and how they influence an individual's response to various situations also need to be understood.

Finally, viewing impulse buying as a behavioural pattern helps to delineate the research objectives. As Skinner (1969) states, to understand a behaviour, it is necessary to see it through the three-term contingency. The research objectives should thus include

studying the interactions between the behaviour and the environmental stimuli and its consequences. In this type of functional analysis, the behaviour may be located and explained. Moreover, the behavioural pattern is crucial to understanding and modifying behaviour (Rachlin, 2000, cited by Foxall, 2011). To understand, predict and control impulse buying behaviour further, it is important to identify the different types of impulse buying behavioural patterns of consumers, whether these are patterns of harmless impulse buying or patterns on the route leading to addictive buying.

2-1-1 Behaviourism and operant theory

As one of the main purposes of this study is to explain behaviourism's view of impulse buying, it is necessary to introduce the philosophy of behaviourism. The work written by Watson (1913), *Psychology as the Behaviorist Views It*, has been regarded as the beginning statement of behaviourism, which explains all human behaviour as responses to certain stimuli and learning. Watson states that psychology should be seen as a natural science and that the goal of psychology is to predict and control behaviour. Watson rejected the explanation of mental states and argued that the scientific approach of psychology should focus on behaviour itself, which can be observed. In his manifesto of behaviourism, he states:

The psychology which I should attempt to build up would take as a starting point, first, the observable fact that organisms, man and animals alike, do adjust themselves to their environment ... secondly, that certain stimuli lead the organisms to make the responses ... the stimuli can be predicted, given the stimuli the response can be predicted. (Watson, 1913:pp.250-251)

This statement reveals the methodology of behaviourism. The first element of Watson's theory is that the scientific way to investigate psychology is to consider all the psychological events as stimuli-response and their association, as this allows the subject to be observable and controllable in a designed environment. The second element of Watsonian behaviourism is the method of studying the behavioural response of other animals, because it is believed to help in the further interpretation of human

behaviour. Therefore, it has become common for behaviourists to use animals such as rats or pigeons in their experiments.

After Watson, B.F. Skinner (1904-1990) contributed some of the most influential works in the field of behaviourism. His operant theory further illustrates the association between behaviours and their consequences and builds up the branch of “radical behaviourism”, which emphasizes the environmental control of the behaviour (Smith, 1986). According to Watson, the explanation of a mental or physiological state should be rejected, whilst mentalism psychologists explain behaviour without considering external factors. In terms of radical behaviourism, Skinner considers that events can take place “within skin” or in private, and he does not ignore the role of cognition (Skinner, 1974). Instead, Skinner emphasizes the nature of the object observed and the reliability of the observation of these private events (Skinner, 1974).

For instance, he argues that if there is no successful methodology to investigate the mental state of an individual, the science of psychology should then look at the accessible subject – the observable behaviour (Skinner, 1963). He also claims that bodily conditions should not be seen as the cause of behaviour but as one of the collateral effects of the cause (Skinner, 1989). He thus agrees with Watson that psychology should be part of natural science, which has the purpose of prediction and control (Skinner, 1953). Moreover, he considers psychology as a branch of biology, and states that the behaviour of organisms should be viewed as a product of both the evolutionary progress of the species and the lifetime of the individuals in question (Skinner, 1974).

Before Skinner’s work, the theories about associative learning offered by Pavlov (1849-1936) or Watson could only interpret the cause of a behaviour through its antecedent stimuli. Taking Thorndike’s law of effect (1927) as a starting point, which illustrates that rewarded behaviour is likely to recur, Skinner developed his influential operant theory. Skinner argues that the law of effect provides a new point of view, that behaviour could be a function. It is thus possible to explain the future behaviour of

organisms without the need for concepts such as purpose, intention, etc. (Skinner, 1963). In other words, the favourable consequences of an action can change the organism by increasing the rate of similar behavioural responding. To put it differently, it is not just the antecedent stimuli that contribute to the organism's learning, but also the association between the behaviour and the following consequences.

Since both the antecedent stimuli and the consequences of a behaviour are provided by the current environment of the organism, radical behaviourism aims to investigate the interaction between behaviour and its environment (O'Donohue & Ferguson, 2001). The three-term contingency "Sd-R-Sr" developed by Skinner (1938) thus provides the fundamental unit of analysis in the study of operant theory. The core of Skinner's operant theory is that reinforcement contingencies of organisms' environment control their behaviour. Moreover, Skinner's work on radical behaviourism provided a new academic foundation, which emphasizes the environmental control of a behavioural response and the ways in which environmental factors directly influence the rate at which behaviour occurs.

2-1-2 Impulse buying as behaviourists view it

Consumer research has a long history of applying cognitive psychology (Foxall, 1987; Solomon et al, 2006). Cognitive theory focuses on investigating the mental decision-making process of human behaviour; it sees the human brain as an information-processing computer, which dominates human behaviour (Steinberg et al, 2006). However, focusing on the individual decision-making process has led to knowledge gaps in the impulse buying literature, such as situational influences.

This point can be illustrated by several previous impulse buying studies based on the cognitive approach. For example, cognitive researchers claim that individual differences in impulsivity lie in individuals' ability to choose a pleasure-seeking goal or a self-regulatory goal (Puri, 1996; Shiv & Fedorikhin, 1999). In other words, consumers have "willpower" to control their impulse buying, and the failure of this self-control leads to impulse buying behaviour (Hoch & Loewenstein, 1991;

Baumeister, 2002; Vohs & Faber, 2007; Hofmann et al, 2008). However, the existing literature also suggests that the self-control ability of individuals can often be influenced by external factors (Shiv & Fedoriklin, 1999; Dittmar & Drury, 2000; Youn & Faber, 2000; Vohs & Faber, 2007; Zhang & Shrum, 2009).

For behaviourists, self-control has been seen as the personal and systematic application of behaviour change strategies that result in the desired modification of one's own behaviour (O'Donohue & Ferguson, 2001). In other words, an individual's self-control is still a behavioural response, which may occur once in a while or frequently. Skinner (1953) argues that self-control can be seen as a set of operant behaviour that influences the rate of other behaviour (such as impulsive or self-indulgent behaviour). The key point is still *the interaction between this behavioural response and its environment*. Therefore, in order to exhibit self-control, individuals should remove themselves from a situation or remove the discriminative stimuli from the setting (Skinner, 1953). This does not necessarily mean that the attitude or motivation of the behaviour will be eliminated. Instead, behaviourism focuses on the observable behaviour itself rather than the pre-behaviour decision process of individuals (Foxall, 1986; Foxall, 1992; Kimble, 2001), and further discusses the setting of the behaviour to explain why such behaviour occurs.

This thesis adopts the view of behaviourism. Behaviourists have definitions of "choice" other than the result of individuals' willpower. In his famous work *On the Law of Effect*, Herrnstein (1970) states that choice is simply a behaviour set in the context of other behaviour, and that the measure of choice is merely the ration of the outputs for the alternative responses. The description above reveals how behaviourists view choice. Instead of describing decision making as being controlled by the individual, choice from the behavioural point of view is described as a set of alternative behavioural responses provided by the environment.

In other words, consumers buy on impulse because the controlled environment allows them to do so. We, as consumers, are similar to those pigeons placed in a Skinner box,

which is designed with two levers – one of which dispenses an immediate reinforcement, and the other delivers later but greater rewards. Impulse buying researchers argue the same: impulse buying is growing due to modern economic and marketing facilities, such as advertisement (Foxall, 2004), promotion (Stern, 1962; Youn & Faber, 2000), credit cards and ATMs (Dittmar et al, 1996). Impulse buying can thus be seen as the product of modern society, as the earliest impulse buying concept is believed to have appeared in the marketing literature for the first time in the 1950s (Clover, 1950; Madhavaram & Laverie, 2004). To conclude, people buy on impulse today because the environment we live in presents us with the option to do so. As Herrnstein writes:

... behavioural allocation comes into equilibrium when it equalizes the average reinforcement rates earned by all active response alternatives in the subject's choice set. This principle, called the matching law, deviates from reinforcement maximization in some, but not all, environments. (Herrnstein, 1990:p.356)

Instead of opting for maximization as rational theory would suggest, organisms sometimes tend to act irrationally depending on the alternatives choice that is given to them. The matching law (Herrnstein, 1970) thus explains that as time advances, the preference would switch and the subjects would then value the small reward more. Therefore, “time” becomes an important variable when researchers investigate the relationship between behavioural response and its reinforcement. Similarly, Ainslie (1975) reports in a later work that subjects tend to value larger but delayed rewards when the choice is made far in advance of the reward delivery. Impulsivity is thus described as the tendency towards immediate reinforcement, such as is displayed in smoking or other addictive behaviours (Baum, 2005). As discussed earlier, for consumers, such immediate reinforcements that turn us into impulsive buyers may include immediate possession of the items (Rook & Gardner, 1993; Kacen & Lee, 2007) or other forms of comfort gained from the purchase.

Human behaviour is a result of a complex set of contingencies (Skinner, 1974; Baum, 2005). Culture, social norms and other verbal behaviours can all serve as reinforcements and punishments that shape human behaviour. For instance, the pleasure associated with smoking behaviour can provide immediate reinforcement for individuals. On the other hand, social encouragement can also serve as reinforcement for people who are trying to quit. We would probably say “well done” to someone who rejected a cigarette. This type of verbal behaviour, as well as cultural or social norms, serves as reinforcement for human behaviour. On the contrary, contingencies of this sort are not that straightforward for impulse buyers who are trying to quit. Impulse buying used to be considered “immature” or “irrational” (Bayley & Nancarrow, 1998). However, the shopping culture nowadays tells us “I shop, therefore I am”. Studies have also shown that peers seem to encourage impulse buying behaviour (Luo, 2005). Impulse buying researchers who study materialism and self-identity also imply that buying certain products on impulse can earn us admiration and social recognition (Hoch & Loewenstein, 1991; Dittmar et al, 1996; Dittmar & Drury, 2000).

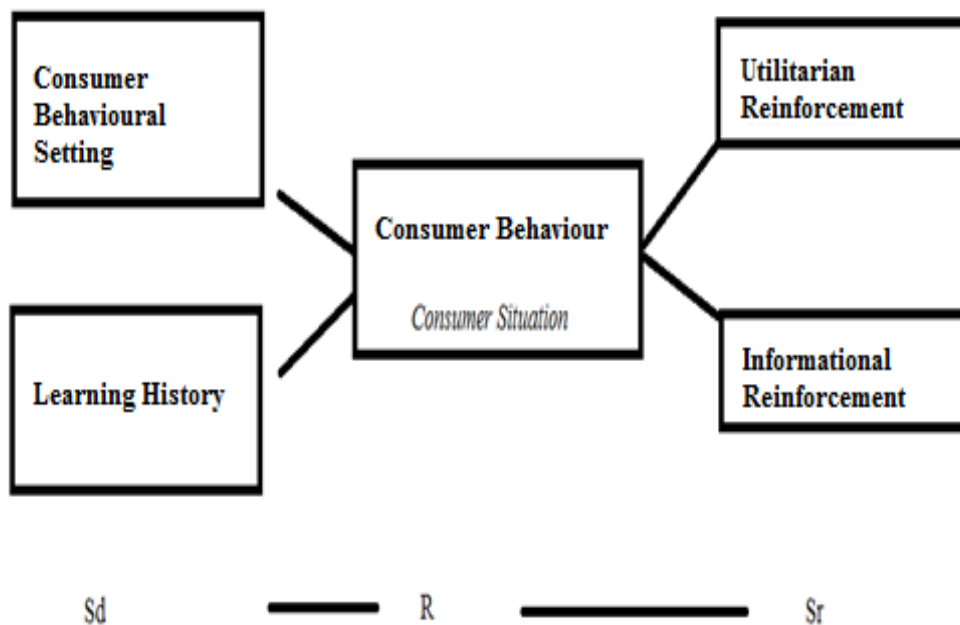
Therefore, our impulse buying behaviour is not only caused by the trap of immediate reinforcement but is also shaped by other reinforcements, such as culture and society. As impulse buying behaviour becomes increasingly common and even popular, it becomes more difficult for impulse buyers to change their behavioural pattern. As consumers, we often buy on impulse because the choice is made available to us, not only by marketers but also by the whole society. In order to understand and control this behaviour, we need to know about the role of various types of reinforcements of impulse buying to understand the consumer choice fully and predict it efficiently.

In summary, behaviourists predict that organisms tend to be “impulsive” when the choice of immediate reinforcement is offered to them. As consumers, we buy on impulse when the situation we are in signals to us that there is a possibility for immediately possessing the desired item. We buy on impulse when the situation we are in indicates to us that we could be admired or envied if we do so.

2-2 The Behavioural Perspective Model

This thesis proposes to apply the behavioural perspective model to the study of impulse buying behaviour. The BPM can be seen as an operant model of consumer choice (Foxall, 1992; Foxall, 1997). It thus shares the same theoretical idea as Skinner's three-term contingency (Skinner, 1938), which suggests that behaviour is the response of an organism to a stimulus (antecedent), and it results in consequences, either reinforcement or punishment. Thus, the focal point of operant theory is that a behaviour is strengthened by reinforcement and diminished by punishment. In other words, contingencies shape an organism's behaviour. Similarly, in the BPM, consumer behaviour results from the interaction of the consumer behavioural setting and the consumer learning history, and the behavioural response is followed by utilitarian reinforcement or punishment, informational reinforcement or punishment, and aversive consequence.

Figure 2: The BPM and Three-Term Contingency (Foxall, 1990; Foxall, 1992; Foxall, 1994)



The consumer behavioural setting can be defined as the specific environment in which consumers make their purchase decision, while the learning history is a more personal factor, such as the previous experience of purchasing certain items. Utilitarian reinforcement or punishment represents the functional and direct gain from the buying decision. On the other hand, informational reinforcement and punishment are the indirect feedback from the purchase, and aversive consequence represents the cost of the consumption, such as waiting in the queue or spending the money. In the end, all the reinforcement or punishment that the consumer receives transfers back to his or her learning history and influences his or her consumer behaviour in the future. Through these interactions, consumer behaviour is shaped by these reinforcements and punishments, as Skinner's operant theory proposes.

2-2-1 How radical behaviourism and the BPM contribute to impulse buying research

As a radical behaviourism model, the BPM can further contribute to impulse buying research in several ways. First of all, while cognitive psychologists analyse the mental processes of an individual, behaviourists tend to emphasize the influence of external factors to explain human behaviour (Foxall, 1987; Kimble, 2001). In the impulse buying literature, a number of studies suggest varied external factors for impulse buying, including environmental or situational factors, such as the store environment (Xu, 2007), specific occasions (Youn & Faber, 2000) and the presence of peers (Luo, 2005).

Even when cognitive researchers discuss impulse buying, they point out that impulse buying may be dominated by external environmental or situational factors (Thomson et al, 1990; Malter, 1996; Vohs & Faber, 2007). However, a model that can integrate all the possible types of external factors is lacking. The BPM illustrates external factors via the concept of the consumer behavioural setting, which is formed by physical, social, temporal and regulatory factors. This can help to *explain and integrate the external factors* of impulse buying into a more complete picture.

By identifying and integrating factors within a behavioural setting, behaviourism is

thus useful for controlling and predicting human behaviour (Baum, 2005). Behavioural therapists argue that human behaviour can be altered by changing the reinforcements and punishments that lead to such behaviour (Solnick et al, 1980; Monterosso & Ainslie, 2007). It has been applied to social marketing to change consumer behaviour, such as improving recycling (Parrott, 2004). With regard to impulse buying, a behavioural model such as the BPM can thus contribute to both marketers and consumers. It is beneficial for marketers to be able to predict consumers' impulse buying behaviour by creating an appropriate behavioural setting. For consumers, behavioural theory could have the indication of social marketing; for example, how to control their own impulse buying behaviour better by understanding how the situation and environment can lead to their choice of impulse buying.

Secondly, Xiao and Nicholson (2011) state that impulse buying can be seen as a "transaction between individual and marketing environment contingently driven or maintained by the effectiveness of ultimate value or stimuli at the time" (p.7). The previous impulse buying literature also indicates that impulse buying is a result of both external factors and individual factors (Beatty & Farrell, 1998; Youn & Faber, 2000; Punj, 2011; Xiao & Nicholson, 2012). The BPM locates consumer behaviour in a consumer situation, which is the meeting point of the consumer behavioural setting and the individual learning history. Therefore, both external and individual factors can be investigated at the same time. The behavioural setting provides external stimuli, and it is the individual learning history that gives these stimuli meanings of signalling reinforcement or punishment (Foxall, 1990; Foxall, 1994). Therefore, the approach of the BPM can also provide a contribution to impulse buying research by documenting consumers' lived experiences in service and retail settings and the patterns of reinforcement within these experiences (Xiao & Nicholson, 2011).

Thirdly, the prior research shows how situational factors can play a role in impulse buying behaviour; however, previous researchers also assume that the IB tendency is consistent across various situations (Beatty & Ferrell, 1998; Jones et al, 2003). This concept remains an assumption, as impulse buying behaviour has not yet been

investigated and compared in various situations simultaneously in one study. One reason for this could be that there is as yet no model that systematically maps out and defines different consumption situations for impulse buying.

For individuals, a “situation” is sometimes described in a subjective, self-perceptive way, such as “I was too tired at that time to control myself”. On the other hand, behaviourism explains and describes a situation in a more objective way by investigating the behaviour–situation interaction. Belk (1974, cited in Belk, 1975) defines situational factors as “all those factors particular to a time and place of observation which do not follow from a knowledge of personal (intra-individual) and stimulus (choice alternative) attributes and which have a demonstrable and systematic effect on current behavior” (p.158). This definition illustrates that situational factors are produced by a “particular time and space”. In other words, in comparison with the concept of environment, situation is more specific and momentary (Belk, 1974).

Behaviourism can offer explanations for various situations by studying the control of the behavioural setting and whether or not it can generate similar behavioural responses. In summary, a behaviourist will not describe a situation as “because the individual feels ...”. Instead, the description of the situation is based on the behavioural response and the specific time and place in which the response has been detected. Therefore, the main contribution of behaviourism to impulse buying research may be that it can provide a conceptualizing situational influence and explore the interaction between environment and behaviour. Furthermore, the BPM matrix provides a theoretical and systematic way to define situations. The BPM matrix identifies eight types of consumption situations based on types of setting and reinforcement, which can provide a theoretical and systematic way to map the situation and thus examine the associated impulse buying behaviour. To put it another way, the BPM matrix can contribute to our understanding of *situational influence* on impulse buying behaviour.

Fourthly, the previous impulse buying literature suggests that impulse buying progresses continuously and that it is related to an individual's behavioural patterns and personality traits. However, how consumers' previous impulse buying experiences influence their future behaviour is rarely discussed (Wu, 2006). Radical behaviourism illustrates the interaction of the reinforcement and the behavioural response. From this perspective, we are able to see impulse buying as a behavioural pattern: in certain situations, people tend to buy on impulse, as these situations signal the immediate reinforcement. Furthermore, when the environment and situation are similar to those of previous impulse buying occasions, we respond with similar behavioural patterns.

In radical behaviourism, learning is the formation of human behaviour, which in turn is defined as the outcome of the interaction between the response and the contingency (Foxall, 1987; Baum, 2002). Behavioural therapists state that prior learning is crucial for impulsive behaviour: that individuals could learn to perform an alternative behavioural response prior to the availability of the impulsive choice, such as avoiding food shopping when hungry (Eisenberger et al, 1982). The learning process can also explain why some individuals can exhibit self-control when facing immediate reinforcement. As the interaction between the behaviour (e.g. impulse buying) and the reinforcement/punishment continues to occur, it is possible that another alternative behavioural response (self-control) appears, leading to additional positive reinforcement (e.g. verbal encouragement from family members).

As a result, this alternative behavioural response (self-control) breaks the chain of the original behaviour (impulse buying) and starts another process of forming behavioural patterns towards self-control (Kanfer & Karoly, 1972). Behaviourism can provide an explanation for the continuum of impulse buying behaviour by explaining impulse buying behaviour as a specific behavioural pattern. Through individuals' process of behavioural learning, the behavioural pattern of impulse buying may be strengthened or diminished. It is therefore important to identify which reinforcements or punishments would have the focal effect in the learning process. This view also supports the view in the previous literature that impulsivity is a trait, and that the

interactive relationships between the impulse buying pattern, the impulsivity traits and the corresponding situations could be the contribution provided by radical behaviourism to impulse buying research.

As it is based on radical behaviourism, the BPM also views consumer behaviour as a continuum, as the post-purchase reinforcement and punishment continue to form consumers' learning history. Therefore, the BPM can be seen as a model that investigates all *pre-purchase*, *purchase* and *post-purchase behaviour*. Also, as a result of this continuous circle, the BPM may be useful for explaining impulse buying behaviour as a behavioural pattern. Moreover, as discussed before, human behaviour such as impulse buying is affected by complex reinforcement and punishment, rather than merely by immediate possession of the purchase. The BPM proposes that there are two types of reinforcement/punishment of consumption: utilitarian and informational. The ways in which these two types of reinforcement actually influence impulse buying behaviour can thus be identified and investigated.

Finally, cognitive psychologists argue that human behaviour is the outcome of attitude, belief and intention (Skinner, 1989). This cognitive view has led the impulse buying literature to investigate impulse buying as a tendency or attitude. However, the focus of such studies is on finding the factors related to such a tendency or attitude, rather than detecting the actual impulse buying choice made by the consumer. The cognitive view of attitude or intention does not always predict the actual behaviour (Fishbein & Ajzen, 1975; Smith & Swinyard, 1983; Sutton, 1998). In radical behaviourism, behaviour itself is the *subject matter*. Radical behaviourism explains behaviour by examining the environment and the behavioural response within, with the rate of behavioural response as the basic datum.

The application of radical behaviourism and the BPM allows this study to examine systematically *the actual consumer impulse buying choice* in different situations, rather than merely testing consumers' impulse buying intent. To the present author's knowledge, no impulse buying research has been conducted that detects impulse

buying choices in different situations at the same time. This could be another contribution provided by radical behaviourism and the BPM.

The need for an integrated model of impulse buying has been recognized, both in this present research and by previous researchers (Beatty & Ferrell, 1998). The BPM is proposed here because it appears to be able to address and integrate comprehensively the possible behavioural factors present in impulse buying. It should also be appropriate for addressing the research questions of this thesis, such as determining the situational influences on impulse buying behaviour.

The discussion above has highlighted how radical behaviourism and the BPM can contribute to impulse buying research. Most previous impulse buying studies focus on two categories of causes of this behaviour: 1) external stimuli, such as environmental or situational factors; and 2) internal factors, such as which variables affect individual consumers' impulse buying tendency. To explain these findings using the BPM, the external factors could be equated with the consumer behavioural setting, and the internal factors could be seen as the consumer learning history. Together, they create the antecedent for impulse buying behaviour, the situations in which impulse buying behaviour occurs. To sum up, this thesis proposes to use the BPM to explain impulse buying behaviour, attempting to address the issues of the previous impulse buying research.

As introduced before, the BPM is a model that explains consumer behaviour with the concept of the three-term contingency (Foxall, 1990; Foxall, 1993). The BPM illustrates discriminative stimuli with two elements: the consumer behavioural setting and the individual learning history. Consumer behaviour occurs at the intersection of these two elements, followed by consequences: utilitarian and informational reinforcement or punishment. The components of the BPM model and how they can be applied to impulse buying behaviour will be discussed in the following.

2-2-2 Consumer behavioural setting

The context within which consumer behaviours occur is referred to in the BPM as the consumer behavioural setting. The concept of “setting” and its relationship with human behaviour has already been studied by researchers. Barker (1968) argues that a particular environment is associated with typical and recurring patterns of behaviour, which means that a behavioural setting should include a specific time, place and action pattern. Therefore, in a standard behavioural setting, certain behaviour can be expected. Similarly, the consumer behavioural setting in the BPM represents a specific environment for consumer behaviour, and it consists of the set of discriminative stimuli that signal reinforcement that is contingent on certain behavioural responses. The behavioural setting of stimuli does not necessarily dictate the behavioural response, but it signals the available reinforcement or punishment when a specific behavioural response is performed. These stimuli can be physical, temporal, social and regulatory (Foxall, 1993), which are introduced in depth below.

Physical factors

The physical factors in the BPM represent a wide range of physical surroundings in a behavioural setting, such as point-of-sale, store surroundings and products (Foxall, 1990). A significant number of studies concerning the physical environment and consumer behaviour by environmental psychologists exist in the marketing literature. Belk (1975) points out that the physical surroundings are one of the main dimensions of a consumer situation. He defines physical surroundings as “the most readily apparent features of a situation ... include geographical and institutional location, decor, sounds, aromas, lighting, weather, and visible configurations of merchandise or other material surrounding the stimulus object” (Belk, 1975), which gives the physical factors of the BPM a broad description.

Furthermore, Bitner (1992) states that physical surroundings can influence consumer and employee behaviour in an organization. Her work, more specifically defined as a “servicescape”, represents a physical setting in which a product or service is purchased. She lists environmental dimensions as ambient conditions, space/function and

signs/symbols/artifacts, as shown in the table below. Ambient conditions include aspects such as temperature and scent, and represent sensory elements, while space/function refer to the spatial environment of the service. Signals, symbols and artifacts, on the other hand, create the atmosphere that would influence the consumer's experiences of the service. Further research supports this model and its application to customers' behavioural intention (Wakefield & Blodgett, 1996).

Table 2: The Factors of a “Servicescape”

Source: Bitner (1992)

Ambient Conditions	Space/Function	Signals, Symbols and Artifacts
Temperature/air quality	Layout	Signage
Scent	Equipment	Personal artifacts
Noise/music, etc.	Furnishings, etc.	Style of decor, etc.

These environmental dimensions can be used to illustrate the physical factors of the BPM in detail, including the physical surroundings, such as atmospherics, and the product itself. Alternative brands and point-of-sale advertisements can also be seen as physical factors of the setting in the BPM (Foxall et al, 2006).

Physical surroundings have been found to influence consumer purchase behaviour in many studies. For instance, Donovan and Rossiter (1982) state that the approach behaviour in the setting is influenced by the perceptions of the environment; thus, the physical environment could have effects on the browsing time and money spent by consumers in a store. Baker et al (1992) also conclude that the store environment influences consumers' willingness to buy. These results further suggest that physical factors can play a role in consumers' impulse buying: in an appropriate physical setting, consumers are more likely to stay in the store for longer and thus buy on impulse (Donovan et al, 1994).

Physical factors and impulse buying

An appropriate environmental setting can make consumers more likely to remain in the store for longer and increase their unplanned purchases (Donovan et al, 1994). The scent of a bakery, or a pair of shoes in a window display, for example, can act as the

stimulus for impulse buying. Beatty and Ferrell (1998) thus argue that such physical proximity can trigger the urge of the consumer and potentially lead in-store browsing to impulse buying behaviour. There are several studies that illustrate how the physical factors in the BPM influence impulse buying. In a study that uses the PAD framework of Mehrabian and Russell (1974), ambient cues in the shopping setting are found to correlate positively with pleasure emotions, which in turn influence the impulse buying behaviour of consumers (Xu, 2007). Similarly, another study shows that an overstimulation shopping setting has a positive impact on impulse buying through increasing the pleasure of consumers (Mattila & Wirtz, 2001; Mattila & Wirtz, 2008).

Visual elements are also linked to impulse buying. Many studies suggest that impulse buying is more reactive to visual elements (e.g. store display, design) than other elements (Rook & Fisher, 1995; Youn & Faber, 2000; Kim & Stoel, 2004; Park et al, 2006). Researchers also find that the visual elements of the product play an important role in online apparel shopping and that products' sensory attributes (e.g. colour, design, fabric, etc.) have direct impacts on online apparel impulse buying (Park et al, 2011). These findings are supported again by a recent study showing that the positive emotions of consumers can be triggered by the ambient/design elements in a retail setting, which can lead to impulse buying behaviour (Chang et al, 2011). For instance, a study finds that the scent and the music in a setting have positive influences on impulse buying (Mattila & Wirtz, 2001). The atmosphere in a store is thus believed to be an important factor for impulse buying behaviour (Mattila & Wirtz, 2001; Coley & Burgess, 2003; Zhou & Wong, 2004; Park et al, 2006). Overall, there is strong evidence that physical settings serve as one of the external stimuli that trigger impulse buying.

In addition to the physical surroundings, products and point-of-sale advertisements are considered as physical factors in the BPM (Foxall et al, 2006). For example, the location of a shelf could be related to the impulse purchase of the product upon it (Abratt & Goodney, 1990); in-store displays and advertisements are also found to influence impulse buying (Tendai & Crispen, 2009). Product attributes can also play a

significant role in impulse buying. The appearance of the product itself can often attract consumers and trigger impulse buying. In other words, for the impulse buyer, the visual elements do not only exist in the ambient design of the retail setting, but can also be provided by the product itself or by point-of-sale signage (Chang et al, 2011; Park et al, 2011). Consumers report in a study that they buy on impulse because the product is “calling” to them (Rook, 1987), and a desired product type is thus also positively linked to consumer impulse buying behaviour (Jones et al, 2003; Park et al, 2006).

The physical factors, such as the surroundings or actual product attributes, are thus seen as external stimuli in the impulse buying literature. Stern (1962) identifies several factors that influence impulse buying based on accessibility and ease of purchase. Most of these factors can be described as physical factors in the BPM, including the physical setting of the store (e.g. mass distribution, self-service, mass advertising and display) and the product attributes (e.g. marginal need, price, small or lightweight). If a product is small and easy to carry, it might be easier for consumers to buy it on impulse, such as the chocolate bars we often see at the checkout point.

To conclude, there are several ways in which the physical factors in the BPM can be linked to impulse buying. A considerable amount of previous studies indicate that the physical factors of the consumer behavioural setting can be built or designed to increase impulse buying behaviour. While the physical surroundings can create an appropriate environment for consumers (Donovan, 1994), the product’s appeal and point-of-purchase promotion represent the utilitarian factor for impulse buying behaviour (Liao et al, 2009). In summary, we can conclude that the physical factors that lead to impulse buying behaviour may be the store design and atmosphere, the point of sale, a stimulating environment, such as a crowd in-store, and the product attributes.

Social factors

Social factors represent the social surroundings in a consumer behavioural setting (Foxall, 1990). According to radical behaviourism, social factors also contribute to environmental control over behaviour. In the world of humans, it is argued by Skinner that social factors are formed by human verbal behaviour. Skinner (1983) states that “By behaving verbally people cooperate more successfully in common ventures. By taking advice, heeding warning, following instructions, and observing rules, they profit from what others have already learned” (cited by O’Donohue & Ferguson, 2001). In other words, we listen, imitate and learn from others so that our behaviour can be reinforced. In a retail setting, we browse and talk to sales assistants, like other shoppers, as we have learned that this is the way we should behave in this type of environment. Therefore, social factors in a consumer behavioural setting do have a certain influence on our shopping behaviour. Baker et al (2002) find that a store environment that is formed by design, ambient and social factors is positively related to consumer patronage. In this framework, the “social factors” of a store environment refer to store employees and other consumers. Tombs and McColl-Kennedy (2003) also argue that the social environment and purchase occasion lead to a desired social density, which influences customers’ responses. Belk (1975) explains that the elements that form a social surrounding include the presence of others, their characteristics, their apparent roles and any interpersonal interaction. Similarly, in the BPM, an event that forms the consumer behavioural setting can also be social, which means the factors that originate from other people, such as sales personnel or other shoppers (Foxall et al, 2006).

Sales personnel or service providers play as important a role as the physical surroundings do because they are also responsible for customers’ perceived service quality, which in turns leads to consumer satisfaction (Cronin & Taylor, 1992). On the other hand, “other shoppers” can mean the crowd in the setting or the consumer’s shopping companion. Scholars state that social motivation (for fun, company) and assistance motivation (moral support for a shopper’s decision, expertise regarding the product) are the main two motivations for a buyer to have a shopping pal (Hartman & Kiecker, 1991; Mangleburg et al, 2004).

In which ways do sales personnel and shopping pals influence our shopping experience or our purchase decision? Two types of social influence are consistently found in the marketing literature – normative influence and informational influence – and researchers have further found that informational influence, which means accepting information from others as the evidence of reality, could strengthen a consumer's purchase behaviour (Mangleburg et al, 2004; Lee et al, 2011). For example, when a sales assistant tells us that a coat really suits us, and when our friends or our shopping pals tell us that “you should really buy it”, we might purchase the item. It is because our shopping behaviour is verbally reinforced by other people around us. This is one way in which social factors can contribute to our choice of purchase in a consumer behavioural setting.

Social factors and impulse buying

The social factors of the consumer behavioural setting refer to the factors caused by others, such as other shoppers or members of staff (Foxall, 1992; Foxall et al, 2006). These factors can be seen as two types: the interaction between others and ourselves, and the control of behaviour caused by others. For example, we as consumers would be more likely to buy if the members of staff in the store are friendly and informative. On the other hand, social factors can also control our behaviour. Sometimes we have to buy gifts under social pressure to show generosity, or in a retail setting we imitate what other people are doing, such as browsing or queuing (Foxall, 1995). Hence, it is not only physical factors that could have control and influence consumer behaviour; social factors can also force or constrain consumer behaviour in a setting.

Several impulse buying studies can also be linked to this type of social factor in the BPM, which is interaction with others. Employee friendliness and perceived crowding are found to have impacts on impulse buying behaviour (Mattila & Wirtz, 2008). This finding supports that the social factors in the BPM do play a role in impulse buying behaviour. Impulse buying behaviour is found to be positively related to self-construal (Zhang & Shrum, 2009), which is how individuals perceive themselves to be linked with other people (Markus & Kitayama, 1991; Zhang & Shrum, 2009). This result

supports the view that peer presence does influence our impulse buying behaviour (Luo, 2005; Zhang & Shrum, 2009).

For instance, the study performed by Luo (2005) presents an interesting result: impulse buying behaviour is positively related to the presence of peers but negatively linked to the presence of family members. These findings imply that impulse buying behaviour may be controlled by the verbal behaviour of others. Friends are normally more encouraging and approving of our impulse buying, while family members typically constrain it. In summary, we sometimes buy on impulse in order to gain self-identity (Dittmar & Drury, 2000) and a linkage with others (Zhang & Shrum, 2009), or because of others' verbal reinforcements (e.g. praise, encouragement, etc.). Another study also confirms the role of social factors by investigating the impulse buying tendency with the scale of consumer susceptibility to interpersonal influence (CSII), and impulse buying is found to be positively related to normative CSII. This indicates the willingness to submit to forces within a social environment when buying (Silvera et al, 2008). Therefore, the previous literature suggests that the presence of peers or other social influences is not only one of the situational factors of impulse buying, but also encourages this behaviour through reinforcement caused by the positive verbal behaviours of others.

Researchers have also found that going out with friends or on a date can be possible triggers of impulse buying (Yound & Faber, 2000). Although both of these occasions suggest that impulse buying behaviour may be influenced by social factors, they also indicate two different ways in which human verbal behaviours can control other behaviours. As we established above, consumers are more likely to buy on impulse when they are going out with friends (Luo, 2005). This may be because of informational reinforcement, such as fitting into a social group or obtaining others' verbal praise. On the other hand, impulse buying while on a date is different, as the control of social factors here is even stronger. Buying a gift while on a date has been seen as an important example of mating behaviour, especially for male consumers (Saad, 2000). For men, this behaviour is not only designed to show generosity, but is

also susceptible to the pressures of courtship. Failing to buy a gift in this situation could even lead to punishments, such as losing the desired mate or receiving negative verbal comments from others.

To conclude, the literature in this field suggests another type of reinforcement of impulse buying. In summary, the social factors of the BPM in this study can be concluded as other shoppers, shopping companions and sales staff. Sometimes we buy things on impulse not because of the actual function or the utility of the product, but to gain approval, suggestion or even admiration from others, allowing us to fit into our society better. Therefore, impulse buying behaviour can be under the control of social influences (Luo, 2005; Zhang & Shrum, 2009).

Temporal factors

Foxall (1990) states that the temporal factors of the BPM are time-related factors of consumer behaviour, such as store opening hours and short-term promotions (Foxall et al, 2006). Belk (1975) argues that the situational variables of consumer behaviour can also be explained from a temporal perspective, which is used to specify the unit of time of the consumer situation. Temporal factors hence can include a specific time of day/season, the time available for the consumer or a promotion period. For example, the Christmas period has always been the busiest shopping season. Researchers find that Christmas shopping has become a distinctive phenomenon in modern society, not only for the purpose of buying gifts for family members, but also for personal shopping by individual consumers (Belk & Bryce, 1993; Laroche et al, 2000). Christmas shopping can thus be seen as ritual shopping for consumers. Ritual consumption such as this is clearly formed by culture and social norms (Rook, 1985), and it represents the social forces and deeper meaning of this behaviour (Rugimbana et al, 2003). Another example is that of the time before Chinese New Year, during which Chinese consumers need to buy “red envelopes” into which money is put for children. Verbal behaviours, which are regarded as the main force for building human culture and social norms (Skinner, 1974), can thus also explain the importance of ritual shopping of this type. Another temporal factor for shopping, although not controlled by the contingencies of

culture and social norms, has also always been the most popular times for shopping. Sales promotion is seen as one of the strongest temporal factors in marketing research. Previous studies show that sales promotion can not only increase unplanned purchases but also attract consumers to enter the store (Laroche et al, 2003).

The temporal factors discussed above are created by external forces, such as society or retailers. On the other hand, temporal factors can also be found from the perspective of individual consumers. For example, the time available to consumers has also been discussed in the marketing literature and has been found to influence consumer behaviours such as unplanned buying and brand choice (Miller & Ginter, 1979; Park et al, 1989). Furthermore, special occasions for individuals, such as holidays and a friend's birthday, can also be included as temporal factors. For instance, Mick and Faure (1998) suggest that consumers are more likely to make self-gifting purchases if they have recently experienced success. Buying gifts for others or other task-oriented shopping can also differentiate a consumer's situation from the situation of usual daily shopping (Belk, 1975).

Temporal factors and impulse buying

Temporal factors appear frequently in the impulse buying literature. Verplanken and Herabadi (2001) describe impulse buying as a "temporal" motive to buy immediately when consumers are exposed to stimuli. We can thus assume that several situational or environmental factors that stimulate impulse buying would also be temporal. They can include sales periods, holidays and a specific occasion or task that describes a given place or time of purchase. The temporal factors in a consumer behavioural setting can be seen as the situational factors of a specific place and time. For example, in their impulse buying model, Beatty and Ferrell (1998) propose that "time and money available" are an important antecedent condition for impulse buying. Whether or not a consumer has "time and money available" at that moment can thus be seen as one of the temporal factors in the BPM.

Temporal factors can also refer to occasions that encourage us to go shopping. Youn and Faber (2000) identify the most frequently endorsed cues for impulse buying, and many temporal factors of the consumer behavioural setting are found to be frequent cues for impulse buying behaviour. These temporal factors include those provided by retailers, such as sales and free gifts. They also include cultural or individual temporal factors, such as special occasions like birthdays, Christmas, vacations and travelling.

We can also see that on some occasions, both temporal factors and social factors can be found simultaneously, such as buying a gift for a friend's birthday to show politeness and generosity or buying Christmas gifts for the family because of traditions or culture. Furthermore, different types of shopping task vary the consumer shopping situations (Belk, 1975). Engaging in self-indulgent shopping behaviour would be a different situation from a situation of buying gifts for others, although both situations could lead to impulse buying behaviour (Youn & Faber, 2000).

Among all the possible temporal factors, both consumers and scholars recognize the importance of sales and promotion. Beatty and Ferrell (1998) describe impulse buying behaviour as a reaction to current environmental encounters, such as sales. Several qualitative studies also show that "item on sale" has been reported by consumers as the reason to buy on impulse (Rook, 1987; Hausman, 2000). One reason why consumers are easily attracted by sales may be that sales, or other forms of promotion, signal both utilitarian and informational reinforcement of the purchase. The ways in which sales and promotion signal utilitarian reinforcement are a familiar concept in marketing research, as several studies find positive correlations between sales and purchase quantity (e.g. see Gupta, 1988).

Although consumers may not have an immediate need for the product, they might still purchase the item if they anticipate that the product can be used in the future. This may suggest that utilitarian reinforcement is the cause of this type of purchase. Stern (1962) argues that taking advantage of store promotions and engaging in planned impulse buying can be described as a smart way of shopping. This can be linked to

informational reinforcement for impulse buying of sale items. Impulse buying of this type is not only efficient and smart, as described by previous researchers (e.g. Stern, 1962; Brusseri et al. 1998); others might also envy us for the bargains we found. In this way, bargain hunting has been suggested to be the source of consumer enjoyment of the in-store shopping experience (Cox et al, 2005), and it has been reported by consumers as an important factor that leads to their impulse buying behaviour. In summary, the most distinct temporal factors of impulse buying behaviour may be “sales or promotion” and “shopping tasks”, which will be used in this study.

Regulatory factors

Regulatory factors refer to the rules of shopping that consumers need to follow (Foxall et al, 2006). As with the social factors, the regulatory factors of behaviour are formed by human verbal behaviour. We have learned that there are some rules that we need to follow and some ways in which we need to behave, otherwise we will be punished. Therefore, rule-governed behaviour can be seen as behaviour that is directly controlled by contingency-specifying stimuli (Pierce & Epling, 1995, cited by O'Donohue & Ferguson, 2001). As consumers, we have learned to follow the rules and the law of shopping: join the queue to pay, do not shoplift and only shop inside the store during opening hours. In summary, during the whole process of purchasing, there are several rule-governed behaviours that consumers need to follow to avoid punishment.

For example, waiting in the queue at the checkout might increase the time pressure on the consumer and affect his or her purchase behaviour. The consumer research literature has long established that a long waiting time in a queue can decrease consumers' satisfaction with the shopping experience, but scholars argue that consumers' perception of the waiting time can be changed by the retail setting (Baker & Cameron, 1996; Antonides et al, 2002). A marketing survey shows that 70% of UK consumers would choose to walk away if the checkout queue is too long, and 43% of consumers prefer self-service checkouts in order to speed up the shopping process (Dickinson, 2006). This evidence suggests that if consumers anticipate long waiting times in a queue, they may actually change their purchase behaviour.

On the other hand, consumption laws can also have direct control over consumer behaviour. Take the sale of alcohol as an example: in the UK, the opening times of bars and restrictions on the times during which alcohol may be sold have been suspected to increase last-minute binge drinking behaviour, as consumers might tend to purchase and consume a large amount of alcohol due to time pressure (Plant & Plant, 2005). Time pressure has also been found to be related to consumer in-store behaviour in grocery shopping situations. Researchers have found that time pressure may decrease the possibility of unplanned buying and brand switching behaviour (Park et al, 1989). Other policies may also influence consumer behaviour by sending out messages to the consumers that the store is reliable, such as returns policies and warranties. For instance, researchers suggest that a store with a good returns policy not only provides consumers with a low-risk shopping experience by reducing their perception of financial risk but also enhances its own store image (Liljander et al, 2009).

In summary, regulatory factors have obvious and direct control over consumer behaviour. Retailers have found that reducing shopping limitations, such as more flexible opening hours or reducing the queue at the checkout, allows consumers to purchase more. To reduce the time pressure on consumers and offer more options for shopping time, 24-hour retailers such as supermarkets have become increasingly popular with consumers (Geiger, 2007). Newly developed marketing channels, such as TV and online shopping, make purchasing even more convenient for consumers (Arnold & Reynolds, 2003).

Regulatory factors and impulse buying

Even in an open setting, in which consumers have more choices between brands and stores, the process of shopping still necessitates several rule-governed behaviours that consumers must follow. One early study of impulse buying argues that retail policy, such as the store opening hours, can influence impulse buying behaviour (Clover, 1950), as time pressure could reduce consumer in-store behaviour, including unplanned buying (Park et al, 1989). Correspondingly, the time available to consumers has also been proposed to be positively related to consumer browsing behaviour, which can

further lead to more impulse buying (Coley & Burgess, 2003). Therefore, the time available to consumers is considered as a factor of impulse buying (Beatty & Farrell, 1998; Park et al, 2006).

Regulatory factors often combine with other temporal factors to form a specific impulse buying situation for consumers. For example, store opening hours certainly have an effect on the time-available factor of consumers or even limit consumers to buying within a specific time frame. In the UK, stores are allowed to open at the weekend, whilst stores in other EU countries, such as Germany, are not allowed to open on Sundays. Hence, unlimited opening hours have been found to be one of the main attractions of online grocery shopping for German consumers (Pechtl, 2003). Similarly, online impulse buying appears to be growing because of such convenience of shopping (LaRose & Eastin, 2002). Another common policy that may encourage impulse buying is a consumer-friendly returns policy. For instance, the popular fashion retailer H&M encourages customers to “buy now, think later” by reminding consumers of its returns policy in every store. Researchers also suggest that a store with a convenient returns policy can also increase impulse buying behaviour by offering consumers a low-risk shopping setting (Park et al, 2006).

Other regulatory factors regarding time should also have effects on consumer impulse buying behaviour. For example, even when consumers make the choice to buy something immediately and impulsively, they must still join the queue for the checkout and pay at the counter. Stern (1962) thus argues that self-service, which enables consumers to pay for their items more easily and quickly, can encourage impulse buying behaviour. Since joining the queue for the checkout is a must, most retailers also design some shelves parallel to the checkout queue to increase last-minute impulse buying. Browsing these last-minute items while queuing might help to reduce consumer impatience. It would be interesting to investigate whether a long queue for the checkout would increase or decrease impulse buying behaviour. Some scholars argue that waiting in a queue has no effect on a consumer’s mood (Chebat et al, 1995, cited by Turley & Milliman, 2000). However, impulse buying behaviour is a behaviour

driven by immediate reinforcement; if consumers must wait in a queue, the reinforcement of impulse buying behaviour could be less immediate and weaker.

The discussion above shows that regulatory factors are linked to impulse buying in the previous literature. In order to encourage impulse buying behaviour, retailers have recently developed new marketing channels (e.g. online shopping or 24-hour supermarkets) and methods of communication (e.g. point-of-sale signage for promoting the returns policy) to remove certain limitations caused by regulatory factors. This study will thus focus on the checkout queue as the regulatory factor, as it is one of the most common regulatory factors that consumers encounter in a shopping situation.

To conclude, evidence provided by the previous literature indicates that physical, social, temporal and regulatory factors can all be found in an impulse buying setting. The previous discussion suggests that all these four factors of the consumer behavioural setting can simultaneously signal both utilitarian and informational reinforcement of impulse buying behaviour. This study thus proposes the following:

Study Proposition 1: Consumer behavioural setting elements significantly influence the consumer impulse buying choice.

2-2-3 Learning history

As mentioned before, the factors of a consumer behavioural setting do not necessarily lead to consumer behaviour, but they signal the possible reinforcement and punishment when a specific behavioural response is performed. The consumer behavioural setting thus indicates one of the crucial points of the BPM and behavioural analysis, which is that consumer behaviour can be predicted when the environmental setting is manipulated or controlled in a certain way. The BPM further illustrates that consumer behaviour is a joint outcome dependent not only on the influence of an environmental setting but also on the learning history of the individual. The ways in which a consumer behavioural setting signals to the consumer are influenced by the individual's learning history. Different individual consumers may enter the same

setting, but whether the setting signals reinforcement or punishment may differ depending on the learning history of each individual consumer.

The learning history (LH) is the accumulative experience of consumers relating to the reinforcement or punishment they received for their past purchases and consumption behaviour (Foxall, 1992). The LH also represents the personal factors that lead the consumer to make an avoidance or approach response in a particular setting. Foxall writes:

It is the learning history that determines what elements of the setting will act as discriminative stimuli on this occasion, and therefore, what consequences of purchase and consumption will function as reinforcers or punishers.
(Foxall, 1994:p.27)

Therefore, even within the same behavioural setting, different learning histories between individuals can result in varied responses, whether they are avoidance or approach (Foxall & Greenley, 1999). For example, when a consumer sees the Starbucks logo, he might anticipate a good experience of purchasing a cup of coffee based on his previous experiences, and therefore decide to enter the store. Thus, we can link several topics of interest in the field of marketing to the LH in the BPM, including store image, consumer satisfaction, brand loyalty, and so on.

The concept of the LH in the BPM is quite similar to the post-purchase evaluation of consumers in the marketing literature, as several tests have been conducted to investigate consumer evaluations of the likely outcomes of future behaviour (see Fishbein & Ajzen, 1975, cited by Foxall, 1998). For instance, the previous Starbucks example could indicate that a brand name can be recognized as a symbol of a certain product for consumers (Levy, 1978; Friedman, 1985). The difference in consumer learning in the BPM is that the behaviour resulting from an individual's LH is learned through being conditioned, rather than through the individual's cognitive reasoning (Taylor & Neslin, 2005). Consumer behaviour in a certain setting will be repeated if

the LH signals reinforcement.

For example, personal variables such as attitude or subjective norms are not congenital but are learned by individuals through their life experiences and past behaviour (Fishbein & Ajzen, 1975). A number of studies of consumer attitude and its relevant forms, such as consumer satisfaction, have been conducted in the marketing literature (Anderson, 1986). The formation of such attitudes is related to people's behavioural outcomes and how they evaluate these outcomes (Sparks & Shepherd, 1992). Therefore, these attitudes express how the individual copes with the corresponding environment, and how the individual learns through past experiences. In addition to attitude, a consumer's social background can be considered as a distinct characteristic of a consumer. For instance, researchers have long reported the existence of cultural differences in shopping behaviour (Lee, 2000; Sun et al, 2004).

Learning history and impulse buying

When consumers enter a specific setting in which physical, social, temporal and regulatory factors serve as antecedent stimuli, the individual's learning history will interpret these signals and give them meanings (Foxall & Goldsmith, 1994). The same holds true for impulse buying: not all consumers will engage in impulse buying behaviour in the same setting. Therefore, researchers argue that impulse buying behaviour must result from both external and internal factors (Rook, 1987; Youn & Faber, 2000; Dawson & Kim, 2009). This point is strongly supported by the BPM, as the model illustrates consumer behaviour at the intersection of the consumer behavioural setting and individual learning history. The following section will discuss how the previous impulse buying literature can be linked to the role of the learning history in the BPM.

The social background, such as the cultural background, educational background and gender, has been investigated in relation to impulse buying behaviour. For instance, the educational background has been linked to impulse buying behaviour. A study shows that consumers with lower levels of education tend to engage in more impulse buying

behaviour than consumers who have obtained higher levels of education (Wood, 1998). Scholars have also found that age is negatively correlated with impulse buying (Wood, 1998; Adelaar et al, 2003). Young people, such as college students, have been found to have a higher impulse buying tendency than others (Weun et al, 1998). Interestingly, researchers of impulsivity have also found that the impulsivity of an individual declines as the individual grows older (Steinberg et al, 2008).

As regards individuals' attitudes, Rook and Fisher (1995) advocate the "normative influence" of impulse buying, which means that consumers are more likely to buy on impulse if they believe the behaviour to be appropriate. This result is further confirmed by a more recent study in the setting of airports, which finds that the relationship between airport impulse buying and related shopping behaviour is significant only when airport shoppers believe that acting on impulse is appropriate (Omar & Kent, 2001).

Other evidence of the impulse buying attitude includes the "positive emotion of shopping", which is investigated by Beatty and Ferrell (1998). The model in that study suggests that consumers are more prone to engaging in impulse buying if they usually enjoy shopping. Interestingly, both the normative influence and the positive emotion of shopping were measured by a questionnaire scale rather than via observation of the actual event. This means that the consumers' attitudes or the positive emotion of shopping were measured through their *previous experiences*. Therefore, consumers' impulse buying experience can be viewed as a crucial learning history variable in the study of impulse buying.

The impulse buying research also argues that the individual psychological mechanisms that drive impulse buying behaviour should be seen as an individual trait (Verplanken & Herabadi, 2001; Baumeister, 2002; Verplanken & Santos, 2011). Several self-administrated scales have therefore been developed to examine consumers' impulse buying tendency (Rook & Fisher, 1995; Weun et al, 1998; Verplanken & Herabadi, 2001). One of the most commonly used measurements of the impulse buying

tendency was developed by Rook and Fisher (1995), and examines the IB tendency by asking consumers to describe their *past purchase behavioural patterns and experiences*, such as “I buy things spontaneously” or “Just do it describes the way I buy things”. Another research topic regarding attitude and impulse buying are the impulse buying studies related to product involvement. Researchers have found that consumers’ impulse buying behaviour is related to their product preference and involvement (Jones et al, 2004). For example, consumers who are more involved in fashion would be more likely to buy fashion items on impulse (Phau & Lo, 2004; Park et al, 2006). Again, these pieces of evidence imply that an individual’s impulse buying behaviour is shaped by his or her lifetime experiences.

As discussed above, the individual learning history, such as educational background, attitude and product involvement, has been widely discussed in the previous impulse buying literature. The main findings of these studies are that all these individual variables are proven to be related to the impulse buying tendency, and they are often measured by consumers’ previous experiences. The impulse buying tendency can thus be used to investigate a consumer’s buying pattern, previous shopping experiences and attitude towards impulse buying (Rook & Fisher, 1995). It has also been regarded as the key individual variable in impulse buying research, which clearly distinguishes impulsive individuals from others (Rook & Fisher, 1995; Beatty & Ferrall, 1998; Jones et al, 2003).

In summary, the impulse buying tendency has been intensively studied and proven to be correlated with all the other individual variables discussed above. Although the impulse buying tendency is often seen as a personality trait in the impulse buying literature (Dholakia, 2000; Jones et al, 2003; Adelaar et al, 2003; Park et al, 2006), it clearly reflects a consumer’s past experiences of impulse buying. This thesis therefore argues that the impulse buying tendency should represent individual past experiences of impulse buying as a learning history variable.

Study Proposition 2: The impulse buying tendency as learning history is positively correlated with the consumer impulse buying choice.

Personality as learning history and impulse buying

The other main topic of research with regard to individual factors of impulse buying behaviour is the role of personality traits. Scholars argue that the impulse buying tendency is rooted in personality (Verplanken & Herabadi, 2001), and the different levels of the impulse buying tendency can be traced back to the various forms of individual genetic make-up (Verplanken & Satos, 2011). In other words, the impulse buying tendency is influenced by individual personality traits, which provide its biological basis. Moreover, several personality traits have been studied in relation to impulse buying behaviour (e.g. Rook & Fisher, 1995; Youn & Faber, 2000; Verplanken & Herabadi, 2001; Sharma et al, 2009).

For instance, Rook and Fisher (1995) develop their measurement of impulse buying tendency from generating an individual impulsiveness scale (Eysenck et al, 1985). Similar personality traits, such as variety seeking, have also been studied in relation to impulse buying by scholars. Sharma et al (2009) find several traits that correlate with both impulse buying and variety seeking: consumer impulsiveness, optimum stimulation and self-monitoring. This finding indicates that impulse buying and variety seeking can both be traced back to the same origin: impulsivity (Punj, 2010).

Moreover, Youn and Faber (2000) identify three personality traits that are correlated with impulse buying: lack of control, stress reaction and absorption. Among these three, the “lack of control” sub-scale, which is also the scale indicating impulsivity, is the most highly correlated with impulse buying tendency in their research. Overall, studies of personality traits and impulse buying reveal that *individual impulsivity* is a crucial facet of impulse buying behaviour. However, there is a lack of research that directly investigates impulsivity and impulse buying behaviour.

Besides previous purchase experience, the learning history represents the personal factors that have an immediate effect on an individual’s behaviour in a setting (Foxall, 1994). The previous literature on personality traits and impulse buying suggests that impulsivity is a crucial factor in impulse buying behaviour. This study thus proposes

that impulsivity should be taken into account as another variable of the learning history to study impulse buying behaviour, for the reasons discussed below.

Several impulse buying scholars imply that impulse buying behaviour stems from biological factors, and that these factors result in individual impulsiveness (Rook & Hoch, 1985; Rook, 1987; Shiv & Fedorikhin, 1999; Sharma et al, 2010; Punj, 2011; Verplanken & Sato, 2011). This may be why most consumers have the experience of being impulsive from time to time. For example, reward seeking, one of the key elements of impulsivity, is proven by researchers to be biologically programmed to encourage risk-taking behaviour, which in turn facilitates mating (Casey et al, 2008; Steinberg et al, 2008).

Moreover, several studies suggest that the choice of a smaller immediate reward is associated with biological evidence, such as serotonergic transmission (Harrison et al., 1997; Eveden, 1999). Scholars thus agree that impulsivity and its related constructs are influenced by multiple environmental and biological factors (Barratt, 1983; Zuckerman, 2003). As discussed earlier in this chapter, the impulsive trait exists in all of us, and the extent of this trait in individuals can therefore be seen as an individual learning history variable. Therefore, this thesis argues that impulsivity should be considered as the individual learning history variable of the BPM for the study of impulse buying behaviour.

Another rationale behind this study proposition is based on the idea that impulse buying is the same as other impulsive behaviour – behaviour that results from impulsivity – that has already been found to be correlated with individual personality traits (Cloninger et al, 1993). There is a substantial amount of research investigating impulsivity as a personality trait and its relationship with other impulsive behaviour, including gambling and compulsive buying (Frost et al, 2001; Lejoyeux et al, 2002; Billieux et al, 2008). Scholars argue that consumer impulsiveness should be seen as part of the consumer lifestyle (Verplanken & Herabadi, 2001; Jones et al, 2003). That is, if a consumer is impulsive about his/her shopping, he/she may be impulsive in other

activities in life as well. This argument may provide the link between impulse buying research and other impulsivity literature.

Impulsivity has been widely discussed in the psychology literature, which can complement the impulse buying research. The bridge between impulsivity literature and impulse buying has already been built by several impulse buying researchers, who establish that impulsivity is the key psychological mechanism that leads to impulse buying (Rook, 1987; Rook & Fisher, 1995; Verplanken & Sato, 2011). However, the impulsivity scales applied in the studies of other impulsive behaviours are rarely seen in the impulse buying literature. Since consumer research has a long history of adopting and extending the theories in other disciplines, such as psychology or sociology (Simonson et al, 2001), the impulse buying research should also benefit from the impulsivity research in the field of psychology. This may be useful for integrating, explaining and comparing the findings of psychological mechanisms of impulse buyers. For instance, our understanding of an impulse buyer could be widened to this individual's other personality traits and the corresponding biological make-up of the traits, as it is often discussed in the psychology literature but less commonly in consumer research. Thus, this thesis proposes to apply the impulsivity scale from the psychology literature as the individual learning history of impulse buying behaviour.

Impulsivity

In his influential work on impulse buying, Rook (1987) states that impulse buying is a behaviour resulting from impulsivity and that impulses are biochemically and psychologically stimulated. However, not many further studies have been conducted to investigate the relationship between impulsivity and impulse buying. To fill this gap in the previous literature, this thesis thus identifies impulsivity as one of the main LH variables when applying the BPM to the study of impulse buying. Most people engage in impulsive behaviour sometimes. It could be just having one more glass of wine, grabbing a chocolate bar as an impulse purchase or lighting up a cigarette while being aware of the risks that smoking poses. Researchers agree that impulsivity does exist in normal personalities and that not all impulsive behaviour is harmful (Dickman, 1990;

Eveden, 1999). However, high-level impulsivity has been shown to be related to some dangerous behaviours, such as substance abuse, problematic gambling or problematic impulse buying (Billieux et al, 2010).

The nature of impulsivity

Due to the multi-faceted nature of impulsivity, most scholars agree that it is difficult to give impulsivity a single definition (Eveden, 1999; Winstanley et al, 2006). Still, the basic elements of impulsivity have been identified by researchers: decreased sensitivity to the negative consequences of behaviour, rapid and unplanned reactions to stimuli before complete processing of information and lack of regard for long-term consequences (Moeller et al, 2001; Maccallum et al, 2007). Therefore, in the psychology literature, impulsivity often refers to “behavior that is performed with little or inadequate forethought” (Eveden, 1999).

The concept of delayed gratification also indicates other factors that influence impulsivity. A delay of gratification suggests that time is a crucial variable that affects the impulsive choice. According to behaviourism, impulsive behaviour is explained as “the tendency towards immediate reinforcement”, even though later reinforcement could be greater and more beneficial for the organism (Baum, 2002). This view corresponds to one of the previous explanations of impulse buying – time-inconsistent preference (Hoch & Loewenstein, 1991) – which means that consumers choose the immediate reinforcement (impulse purchase) instead of long-term reinforcement (such as saving money). In summary, the nature of impulsivity reveals two key elements. One is a rapid response without regard for the consequences, and the other is a tendency to choose an immediate reward. These descriptions can be found in many impulse buying studies, further strengthening the idea that the impulsivity of an individual is a key variable of impulse buying behaviour.

The literature on impulsivity also supports the idea that impulsivity is not a unitary construct, but rather is multi-faceted (Whiteside & Lynam, 2001; Miller et al, 2004). The investigation of impulsivity thus also follows this concept. For example, in

Cloninger's (1987) Tridimensional Personality Questionnaire, the three dimensions are novelty seeking, harm avoidance and reward dependence. Although these three dimensions of personality have no direct correlation with impulsivity, other researchers later find in later work that the characteristics of impulsivity are present across these three dimensions of personality (Eveden, 1999; Punj, 2011). This research further proves that impulsivity can exist as a normal personality trait.

Since impulsivity exists in the common personality traits within a normal population, researchers have suggested that impulsivity is not necessarily bad for us. Dickman (1990) proposes two types of impulsivity: functional and dysfunctional impulsivity. Functional impulsivity refers to an action with little forethought when the situation is optimal. On the other hand, dysfunctional impulsivity refers to the inability to use a slower information process under certain circumstances. He points out that not all impulsive behaviour is harmful, and these two kinds of impulsivity appear unrelated.

Other scholars also suggest that impulsivity can be divided into rash impulsivity and reward impulsivity, and it is rapid impulsivity that reflects the personality disorder (Swann et al, 2002). Indeed, all people engage in impulsive behaviour at some level, as impulsivity is one part of a normal personality. In other words, people are capable of engaging in impulsive behaviour, and not all people do so to a problematic degree. This may be because impulsivity has a biological basis.

The measurement of impulsivity: The UPPS Impulsive Behaviour Scale

The link between impulsivity theory and consumer behaviour is not new (Xiao & Nicholson, 2011), and impulse buying has long been discussed along with impulsivity (Rook, 1987; Foxall, 2010; Punj, 2011). However, most impulse buying studies either refer to impulsivity as the "hot" state of a dual system of decision making (Hoch & Loewenstein, 1991; Strack et al, 2006; Hofmann et al, 2008) or only investigate one facet of the related factors (Vohs & Faber, 2007; Sharma et al, 2010). The construct of impulsivity should be seen as multi-faceted (Eveden, 1999). Impulse buying researchers also suggest that as impulsivity has multi-dimensions, there are also

different facets of impulse buying behaviour (Youn & Faber, 2000).

Youn and Faber (2000) identify three personality factors that relate to impulse buying behaviour: “lack of control”, “stress reaction” and “absorption”. However, there are different environmental cues that correspond to each personality factor to lead impulse buying behaviour. In other words, there are different types of impulse buying behaviour: impulse buying behaviour is multi-faceted as well. This study proposes to use urgency–premeditation–perseverance–sensation-seeking (UPPS) as the measurement to examine consumer impulsivity, as its multi-faceted construct is more suited to impulse buying research. The rationales of using UPPS are discussed below.

Measurements of impulsivity are commonly found in the psychology and personality literature. Researchers use self-reporting personality questionnaires to test impulsivity, including the Barratt Impulsiveness Scale (Barratt, 1994), UPPS (Whiteside & Lynam, 2001) and I7 (Eysenck & Eysenck, 1978; Eysenck, 1992). All these impulsivity measurements are widely used to study impulsiveness and related behaviours. This study argues that the Barratt Impulsiveness Scale is not the most suitable for impulse buying research because it does not incorporate the element of sensation seeking.

Researchers point out that the Barratt Impulsiveness Scale is used to measure a different dimension of personality from sensation seeking (Patton et al, 1995; Lejoyeux et al, 1998), while the impulse buying literature implies that sensation seeking plays a role in impulse buying behaviour (Rook, 1987; O’Guinn & Faber, 1989; Kacen & Lee, 2002; Sharma et al, 2010).

Secondly, the I7 might also be insufficient for this study. One reason is that the impulse buying tendency measurement used in this study was originally developed by generating this impulsiveness scale (Rook & Fisher, 1995). Several items in the I7 are thus repetitive regarding the impulse buying tendency measurement, such as “I often buy things on impulse” or “I often do things on the spur of the moment”. Moreover, the empathy sub-scale in this inventory examines emotional responses, such as “do you

often get emotionally involved with your friends' problems", which is not the main theme in this study.

Thirdly, the UPPS scale is one of the most commonly used measurements in the study of human behaviour, having been applied to studies including topics such as alcohol abuse (Whiteside & Lynam, 2003; Whiteside & Lynam, 2009), the drinking behaviour of college students (Magid & Colder, 2007), heavy usage of mobile phones (Billieux et al, 2008b) and smoking (Billieux et al, 2007). UPPS is also used to investigate problematic behaviours such as eating disorders (Claes et al, 2005; Mobbs et al, 2010), pathological gambling (Whiteside et al, 2005) and compulsive buying (Billieux et al, 2008a). The wide use of UPPS in studies of various behaviours indicates that it is efficient and useful in investigating behaviour that relates to impulsivity and its psychological factors. Therefore, the application of UPPS to the study of impulse buying behaviour should also enable a promising examination of the variety of impulse buying behaviour.

The components of UPPS

For the reasons discussed above, this study proposes to use UPPS as the measurement of individual impulsivity. The components of UPPS will be introduced in the following. UPPS was developed by Whiteside and Lynam (2001) based on the Five Factors personality model, and indicates that impulsivity is formed by four distinct facets of personality: urgency, lack of premeditation, lack of perseverance and sensation seeking.

Urgency represents the tendency to "commit rash or regrettable actions as a result of intense negative effect", and is linked to neuroticism (Whiside & Lynam, 2001). Urgency can be described as the impulse to act in order to escape a current situation, even if the consequences of this action would be more harmful. Urgency has been found to correlate with problematic behaviour, such as compulsive buying and overuse of mobile phones or the Internet, by resulting in an action that is "performed with short-term perspective of emotion management through immediate positive or negative

reinforcement” (Billieux et al, 2010:p.1094). Urgency has been proposed to be a predictor of compulsive buying, which is described as a problematic and excessive buying behaviour (Billieux et al, 2008a). Researchers also suggest that impulse buying could occur when individuals try to escape negative moods (Rook & Gardner, 1993; Youn & Faber, 2000), which may be explained by the urgency of impulsivity; that is, impulse buying behaviour may be a behaviour engaged in by consumers to escape from negative effects.

Lack of premeditation refers to the inability to think and reflect upon consequences before acting. This scale is linked to the deliberation facet of conscientiousness and it describes cognitive effort rather than behavioural impulsivity (Magid & Colder, 2007). Lack of premeditation is often seen in descriptions of impulsive behaviour, including impulse buying, as the definition of impulse buying refers to buying on the spur of the moment and without regard for consequences (Rook, 1987). Stern (1962) argues that the starting point of impulse buying is “unplanned”, which may also be linked to premeditation.

Lack of perseverance refers to the inability to remain focused on the task if it is boring and/or difficult. This scale can be used to describe whether an individual can be resistant to or focused on a task as well as representing the self-discipline facet of conscientiousness, which implies the ability of self-control. For example, one study shows that individuals who score low on perseverance are more likely to experience high levels of alcohol problems (Magid & Colder, 2007). Consumer regulation (Kwak et al, 2006; Sharma et al, 2010; Siorowska, 2011) or self-discipline (Baumeister, 2002; Vohs & Faber, 2007) have already been argued in the impulse buying literature to be a main factor of impulse buying. Similar to the definition of perseverance, one study reveals that when individuals experience self-depletion – that is, when they are tired or exhausted and unable to stay focused – they tend to be more likely to buy on impulse (Vohs & Faber, 2007).

Sensation seeking refers to the tendency to experience positive and exciting feelings about enjoyable and risky activities, and to pursue these activities for the feelings they create, as well as a tendency to be open to new experiences. This scale has been linked to extroversion, and it has not yet been found to be linked to impulse buying directly. However, impulse buying has been found to be positively correlated with similar traits, such as variety seeking (Sharma et al, 2009). Another study also shows that sensation seeking, impulse buying and openness to experience are all predicted by a consumer's materialism and money conservation (Troisi et al, 2006). Therefore, sensation seeking is also a trait that may lead to impulse buying, as consumers also describe their impulse buying experiences as thrilling and exciting (Rook, 1987; Kacen & Lee, 2002).

In summary, UPPS illustrates the key facets of impulsivity, and each facet has distinct elements of the impulsivity personality. Therefore, the application of UPPS may be a suitable approach to one of the objectives of this thesis, which is to identify the roles of various impulsivity elements in different types of impulse buying behaviour and in different consumption situations. This could bring to the impulse buying research a better understanding of how different impulsivity mechanisms operate during the continuum range of everyday consumption settings (Xiao & Nicholson, 2011). The discussion above thus supports the study proposition in this thesis that UPPS should be included as the other variable of LH in the study of impulse buying. This is not only because impulsivity should be regarded as the source of impulse buying behaviour, but also because each facet of UPPS could also contribute to the exploration of different types of impulse buying behaviour.

Study Proposition 3: Impulsivity as learning history is significantly related to the consumer impulse buying choice.

SP3-1: Urgency is positively correlated with the consumer impulse buying choice.

SP3-2: Premeditation is negatively correlated with the consumer impulse buying choice.

SP3-3: Perseverance is negatively correlated with the consumer impulse buying choice.

SP3-4: Sensation seeking is positively correlated with the consumer impulse buying choice.

Cultural background as individual learning history

In addition to considering the impulse buying tendency and impulsivity traits as learning history variables, it is the view of this study that the analysis of impulse buying behaviour would be incomplete if the individual's cultural background was not included. Radical behaviourism explains human behaviour by three levels of selection: natural selection from the human evolutionary process, operant behaviour (selected by consequences) and cultural selection (O'Donohue & Ferguson, 2001).

Skinner (1984) defines culture as "the contingencies of social reinforcement maintained by a group", transmitted and maintained by human verbal behaviours. The culture of a group evolves to solve its problems, and it is the effect on the group that is responsible for the evolution of the culture (Skinner, 1981). Thus, culture is not only a learned behaviour (Tomasello et al, 1993; O'Donohue & Ferguson, 2001; Glenn, 2004); it is also the accumulation of each individual's learned behaviour, which affects all the members of the cultural group.

By taking the individual cultural background into account in this study, we can gain a better understanding of impulse buying behaviour in a specific social environment and the ways in which impulse buying behaviour is presented by a group of members of this social environment. Saad (2006) offers a similar argument. He claims that cultural products exist in their particular forms because they are manifestations of our evolved preferences, and they can be selected within a given culture and subsequently spread within the population. Therefore, culture cannot be reduced to a smaller unit of analysis (Saad, 2006).

Cross-cultural comparison has been a significant topic in consumer research. For instance, one study compares the shopping behaviour of American and Chinese consumers in shopping malls (Li et al, 2004). This study reveals that American

consumers go to the mall for entertainment reasons, while Chinese consumers make their trips to the mall mainly to satisfy their utilitarian needs.

Moreover, Chinese consumers appear to be more cautious about their purchases and to place a greater value on the atmosphere in the mall. Interestingly, the proportion of unplanned buying between the two groups is found to be fairly equal in this study. Another study also shows that North American consumers use more sources of information for their purchases than Chinese consumers, and that Chinese consumers are willing to spend more time waiting before purchasing a product (Doran, 2002). This study thus finds that North American consumers have a higher proportion of impulse buying behaviour than Chinese consumers, and their purchases tend to be made within a shorter time frame (Dorna, 2002).

It has also been found repeatedly that the financial choices made by Chinese respondents are significantly less risk-averse than those made by consumers in the United States (Weber & Hsee, 1998; Hsee & Weber, 1999). The basic framework of cultural analysis – collectivism and individualism (Hofstede, 1980) – is used to explain the differences found in the above studies, and allows us to infer that there are cultural influences on consumer behaviour. More cross-cultural comparisons have been investigated concerning the topics of consumer involvement (Zaichkowsky & Sood, 1989; Goldsmith et al, 1993), social values of purchases (Kim et al, 2002), advertisements and consumer attitude (Tse et al, 1989) and price (Ackerman & Tellis, 2001). In summary, it is evident that a consumer's cultural background does influence the variety of that consumer's behaviour. Thus, this study on impulse buying behaviour will be more complete if the cultural background of consumers is taken into account.

The impulse buying literature also calls for cross-cultural studies (Kacen & Lee, 2002). Researchers argue that most existing frameworks of impulse buying are developed and investigated from the perspective of Western culture, and of the US in particular (Kacen & Lee, 2002; Mai et al, 2003). Gardner and Rook (1988) also argue that the cultural factors of impulse buying behaviour should be studied, as some cultures might

consider self-indulgence behaviours, such as impulse buying, to be “sinful”, which may thus influence individuals’ impulse buying behaviour.

Several studies have provided an insight into impulse buying behaviour in countries such as China (Zhou & Wong, 2004; Yu & Bastin, 2010) and Vietnam (Mai et al, 2003). The impulse buying literature could still benefit, however, from more cross-cultural comparison studies (Kacen & Lee, 2002; Lee & Kacen, 2008). The most significant works on cross-cultural impulse buying behaviour are by Kacen and Lee (2002). They conducted survey studies in five countries and find that consumers from individualist countries such as Australia and the US engage in more impulse buying than consumers from collectivist countries such as China (Hong Kong) and Malaysia.

Doran (2002) also reaches the same conclusion after comparing North American and Chinese consumers’ buying behaviour: North American consumers engage in more impulse buying behaviour than Chinese consumers. Yu and Bastin (2010) also argue that although impulse buying is becoming increasingly common for Chinese consumers, Chinese consumer behaviour is still strongly influenced by cultural values. Correspondingly, consumers from individualist cultures are found to have higher self-reported buying impulsiveness in Kacen and Lee’s study (2002). This study further reveals that collectivist consumers’ impulse buying behaviour is more influenced by social factors: the post-purchase satisfaction of collectivist consumers is higher if important others are with them at the time of the purchase (Lee & Kacen, 2008). This suggests that informational reinforcement of impulse buying behaviour would be more important for consumers from collectivist countries.

These previous studies provide this thesis with a theoretical base for the study propositions regarding cultural factors and their influence on impulse buying behaviour. The substantial number of cross-cultural studies also provides this study with the tools to analyse and explain cultural differences. Hofstede (1980) identifies four dimensions of national character: power distance, individualism–collectivism, masculinity–femininity and uncertainty avoidance. Among these, individualism–collectivism is very

commonly used in social science (Triandis et al, 1990) as well as in consumer research (e.g. de Mooij & Hofstede, 2002; Kacen & Lee, 2002; Soares et al, 2007).

Individuals in collectivist countries have been found to be more concerned with rewards and punishments from in-group members, and have a lower need to be unique (Yamaguchi et al, 1995; Triandis, 2001). Individualist people, on the other hand, are more concerned with their personal needs and preferences (Triandis, 1994; cited in Kacen & Lee, 2002). This may be one reason why collectivist consumers' impulse buying behaviour is more influenced by the social influence (Lee & Kacen, 2008). Moreover, the individualism–collectivism framework has also been theorized to be linked with personality traits (Hofstede & McCrae, 2004). For instance, extraversion is observed to be more common in individualistic cultures than in collectivist cultures (Lucas et al, 2000). As extraversion has been found to be a personality trait that correlates with impulse buying tendency (Verplanken & Herabadi, 2001; Silvera et al, 2008), consumers from individualist cultures could be more likely to engage in impulse buying behaviour than consumers from collectivist cultures.

Another national character that is proposed by Hofstede (1980) is masculinity–femininity. Bem (1975) suggests that individuals with a feminine gender role are more likely to conform to group pressures than those individuals with a masculine sex role. This statement appears to indicate that collectivist countries are more likely to be formed by more feminine individuals. However, there is other evidence showing the inconsistency of the correlation between masculinity–femininity and individualism–collectivism. For instance, Taiwan is rated very low on the individualism spectrum but high on the masculinity spectrum in one study (Spector et al, 2001). In order to examine a behaviour and its link to cultural factors more completely, it is worth investigating individuals' masculinity–femininity as well.

Hofstede (1998) proposes a group level of masculinity and femininity. This study will use the Bem Sex Role Inventory (BSRI) to measure the individual level of masculinity and femininity, so that the cultural dimensions can be examined at both the macro and

the micro level. As Erez and Gati (2004) state, both macro and micro levels need to be considered when examining a behaviour within a cultural context. The BSRI has been widely used to test individuals' gender role (Holt & Ellis, 1998), and it is also often used in consumer research (Palan, 2001). This study thus includes the masculinity–femininity concept to explain the cultural factors of impulse buying.

This study investigates impulse buying choice within both British and Taiwanese populations. The UK is rated as a more individualist country, while Taiwan is a more collectivist society (Spector et al, 2001). Of course, the UK and Taiwan are two very different social environments, as these two countries could represent the basic Western–Eastern differences. British consumers have been found to differ from Taiwanese consumers in several perspectives, such as perception of colour (Grimes & Doole, 1998) and online shopping behaviour (Shiu & Dawson, 2002).

To this author's knowledge, there is not yet an impulse buying study explicitly comparing the impulse buying behaviour of British and Taiwanese consumers. For this reason, having proposed to investigate the cultural factors of impulse buying, this study can not only offer more cross-cultural data to the existing impulse buying literature, but also explore the differences between British and Taiwanese consumers' impulse buying behaviour. To conclude, this study includes the individual cultural background as one of the learning history variables. As with other learning history variables, an individual's cultural background is expected to influence his or her impulse buying choice. Following the discussion above, this study proposes the following study proposition.

Study Proposition 4: There will be cultural differences in consumer impulse buying choice. British consumers will make more impulse buying choices than Taiwanese consumers.

2-2-4 Reinforcement and punishment

In the BPM, after engaging in consumption behaviour, a consumer would receive reinforcement or punishment as a consequence of that behaviour. According to the BPM, reinforcement can be classified into two types: utilitarian reinforcement and informational reinforcement. Utilitarian reinforcement refers to the actual functional benefits of the consumption (Foxall & Yani-de-Soriano, 2005) as well as the hedonic feelings of the consumer from owning or consuming the product (Foxall, 1997). Informational reinforcement refers to indirect feedback, such as verbal feedback, on consumer behaviour (Foxall, 1997).

The concept here is very similar to a consumer's motive for purchase in the marketing literature. Park and Mittal (1985) list several shopping motives for consumers, including product-oriented, experiential, variety seeking, informational search, convenience, recreational and social interaction. These motives for shopping imply two different aspects of the result of shopping: buying the products and their outcome, and the process of buying and its outcome. Holbrook and Hirschman (1982) suggest buying for instrumental, functional and utilitarian reasons, such as buying a washing machine, or buying for affective, hedonic, emotional means, such as going to a concert.

Based on Maslow's Hierarchy of Needs (1943), Foxall and Goldsmith (1994) list six consumer needs that help classify a consumer's motives for consumption, including physiological needs, social needs, symbolic needs, hedonic needs, cognitive needs and experimental needs. Park and Mittal (1985) describe motivation as "goal-directed arousal", which could imply that consumers could expect the outcome of certain behaviour and thus are motivated to perform it. Rather than talking about the motive of individuals, the behavioural perspective puts the emphasis on the reinforcers or punishers of the behaviour. For example, on a cold winter's day, a consumer purchases a cup of hot chocolate, and it makes him or her feel warm. Then, the hot drink would be the reinforcer, which will reinforce the behaviour to be repeated next time in a similar situation. On the other hand, if this hot chocolate tastes bad, then it could be a punisher. The consumer might avoid similar buying behaviour.

Examples of utilitarian reinforcement can be found in the previous marketing literature. For instance, scholars have proposed that the consumer perceived value of shopping should be divided into two distinct values: utilitarian and hedonic value (Babin et al, 1994). Utilitarian value in that study is defined as “deliberant and efficient” purchase (p.646), whilst hedonic value refers to purchases made for fun. Another study also suggests a type of shopping, the “instrumental purchase” (Holbrook & Hirschman, 1982). The utilitarian reinforcement in the BPM simply refers to the direct feedback for consumers that comes from buying and owning the product, which is quite different from the other definitions of “utilitarian” above. It indicates not only that the purchase is useful and instrumental, but also that consumers can enjoy owning and gaining the product. For example, a consumer purchases a cup of coffee, and then he/she actually enjoys the taste of the coffee.

On the other hand, informational reinforcement refers to the indirect feedback for consumers. It provides consumers with symbolic feedback after the purchase, such as expressing social status and gaining more self-esteem. For instance, consumers are more likely to buy a car taking into consideration their own self-image and social status, rather than merely buying or seeing a car solely as a means of transportation (Foxall & Goldsmith, 1994). Indeed, symbolic consumption has been recognized by marketing researchers for decades, as consumers sometimes tend to buy goods that possess meanings beyond the actual tangible characteristics of the material objects (Levy, 1959). Products of this kind thus represent the meaning of social status, group membership and self-identity (Witt, 2010). Researchers further argue that symbolic consumption is a socially contingent activity, as the meaning of these products or brands is constantly shaped by the society (Dittmar, 1992; Witt, 2010). Informational reinforcement, therefore, also plays a crucial role in shaping consumer behaviour.

Utilitarian reinforcement and informational reinforcement here in the BPM are different from other consumer motives for shopping for another reason: they are provided by others rather than obtained by consumers themselves. Utilitarian reinforcement is provided by the product itself after purchase, and informational

reinforcement may be given by other people in the social context to evaluate consumers after their behaviour. Consumer behaviour is shaped and maintained by these two contingencies simultaneously. Furthermore, aversive outcomes are included in the BPM as one of the consequences of consumer behaviour, which represents the costs of the consumption, whether it may be money or time spent shopping.

Reinforcement of impulse buying

In behavioural theory, reinforcement refers to the consequence that an organism receives after a behavioural response, which not only strengthens that behaviour but also increases the rate of that behavioural response occurring in a future similar situational setting. In the impulse buying literature, evidence of both utilitarian and informational reinforcement can be found. They are described as “the motivation” for consumers to buy on impulse in the impulse buying literature. For example, Hausman (2000) explains the motivation of impulse buying as hedonic shopping, which means that consumers buy products on impulse to satisfy emotional needs, such as for fun, fantasy and social reasons, rather than actual needs for products.

The statement above indicates that utilitarian reinforcement (e.g. impulse buying is fun) and informational reinforcement (e.g. social needs and satisfaction of individuals) can both easily be found in impulse buying behaviour. This may be why impulse buying behaviour is difficult to stop. Behaviourists argue that removing reinforcement for a behaviour is a way of exhibiting self-control (Skinner, 1974), but reinforcements of impulse buying behaviour appear to be varied and plenty. On the other hand, punishments for impulse buying are also implied in the previous literature, as consumers sometimes regret their impulse buying (Rook, 1987). As the consequences of impulse buying are not discussed as often (Yi & Baumgartner, 2011), the present author is attempting to identify the function of reinforcement and punishment for impulse buying in the previous literature, which is introduced in the following section.

Utilitarian reinforcement

Impulse buying researchers state that impulse buyers tend to show hedonic rather than functional purposes for their impulse purchases (Silvera et al, 2008; Herabadi et al, 2009). However, this does not mean that utilitarian reinforcement has a lesser effect on impulse buying behaviour. Impulse buying is not only about acquiring goods for needs, but about doing something special and fun through purchasing these goods (Rook, 1987). Therefore, even if there is an emotional or psychological side to impulse buying behaviour, the acts of making the purchase itself and obtaining the desired goods are still the source of these emotional outcomes for consumers.

This argument can be further explained by the concept of materialism, which is defined as “the tendency to view worldly possessions as important sources of satisfaction in life” (Belk & Pollay, 1985; cited by Richins, 1987). It is obtaining the goods that delivers the satisfaction or other hedonic outcomes of impulse buying. Scholars therefore suggest an important link between materialism and impulse buying behaviour (Dittmar et al, 1996; Mick, 1996).

It may be true that we want or desire something immediately because we have learned or know that it can be enjoyable and useful. At this level, it is the utilitarian reinforcement that drives us to our impulse buying behaviour. The product itself often signals to us in this way and serves as a stimulus for impulse buying behaviour. Other theoretical evidence that the product itself signals utilitarian reinforcement is provided by the studies on product involvement and impulse buying. Researchers have also tested the concept of product involvement and impulse buying, and found that product involvement with clothes or music has a significant positive influence on the impulse buying of such items (Jones et al, 2003). Moreover, people who have higher fashion involvement would be more likely to buy fashion items on impulse and score higher on the positive shopping emotion and hedonic consumption scale as well (Park et al, 2006). These findings further support the idea that a product itself can encourage impulse buying behaviour as utilitarian reinforcement. In fact, some consumers report that they buy on impulse because the product is “calling” for them to purchase it (Rook,

1987), which implies that the product as utilitarian reinforcement could be quite powerful.

Informational reinforcement

Scholars also state that consumption provides symbolic meanings of identity construction, maintenance, and communication (Elliot, 1998). Therefore, products or goods in this case serve as symbolic rather than merely functional objects. This can be seen as one of the main differences between utilitarian reinforcement and informational reinforcement. Informational reinforcement represents feedback from the purchase on the level of consumer performance or in terms of social status, such as buying luxury goods or innovative products or services (Foxall & Greenley, 1999). The evidence of informational reinforcement of impulse buying behaviour can be explained in several ways. Firstly, the symbolic meaning of products has been argued to be one of the main causes of impulse buying behaviour, especially when the product can boost a consumer's self-image (Dittmar et al, 1995; Coley & Burgess, 2003; Phau & Lo, 2004; Park et al, 2006). Researchers have found that some products are more likely to be bought on impulse than others, such as costume jewellery (Bellenger et al, 1978). Researchers thus suggest that, if the product possesses specific symbolic meanings that match the consumer's self-concept, impulse buying of that product will be more compelling and irresistible (Burroughs, 1996).

Dittmar and her colleagues conducted a series of studies on impulse buying and its symbolic implication, and they conclude that products bought on impulse can reflect a consumer's self-identity and self-image. For example, men and women tend to buy different products on impulse, which may show their gender identity (Dittmar et al, 1995). Moreover, impulse buyers tend to buy products that have a more social appearance, and purchasing such items can be even more important than the shopping experience for impulse buyers (Dittmar & Drury, 2000). The purchase of these products can help consumers to enhance their self-image and social approval, which can thus be seen as informational reinforcement of impulse buying.

Impulse buying has also been linked to low self-esteem (Verplaken et al, 2005; Silvera et al, 2008), and the ways in which self-esteem is associated with consumption are commonly discussed in the literature on excessive buying behaviour. For instance, materialism and low self-esteem are found in so-called “compulsive buyers” (Scherhorn, 1990; Yurchisin & Johnson, 2004). This suggests that the informational reinforcement of impulse buying not only exists but can even be powerful enough to form an excessive and addictive pattern of impulse buying behaviour.

Besides boosting self-image and self-esteem, informational reinforcement also represents the performance of consumers regarding the consumption. Consumers themselves may gain more self-esteem after impulse buying, but would others or the society comment on their performance as impulse buyers? Scholars point out that social reaction or judgement could be one of the negative consequences of impulse buying (Rook & Hoch, 1985; Rook, 1987). For instance, impulse buying used to be regarded as the “dark side of consumer behaviour” and immature behaviour (Bayley & Nancarrow, 1998).

However, since shopping has become a major leisure and lifestyle activity in modern society (Dittmar et al, 1996), the social value of shopping tends more towards the positive side. Modern society nowadays appears to appreciate the expression of impulse and instant gratification (Wood, 1998), which may have changed the social view of impulse buying from “bad” and “immature” to common and approvable. Impulse buying behaviour can now fulfil social needs. Hausmann (2000) finds that college students who have more social participation and social involvement are more likely to engage in impulse buying behaviour. In other words, impulse buying behaviour is no longer so “bad”, and may even be encouraged by certain social influences. Studies have reported that the impulse buying tendency can be increased by the presence of peers (Luo, 2005; Zhang & Shrum, 2009).

As symbolic consumption has long been a phenomenon in Western society (Dittmar, 1994), the evidence of informational reinforcement has also been found in the impulse

buying literature of transitional societies, such as China. Yu and Bastin (2010) find that praise from others has a positive correlation with Chinese consumers' impulse buying intention. Moreover, in their qualitative interviews, they find that Chinese consumers expect and appreciate comments from others when they go shopping, and that the comments or praise from others influence their purchase decision. They further suggest that this could be one reason why consumers enjoy going shopping with friends and are more likely to buy more items on impulse when they do. This corresponds to the study of Luo (2005), which proposes that peer presence influences impulse buying behaviour. To conclude, if impulse buying is no longer considered "bad" consumer behaviour, but is even encouraged by others, the behaviour itself thus has informational reinforcement as one of its consequences.

The effects of reinforcement and punishment on impulse buying

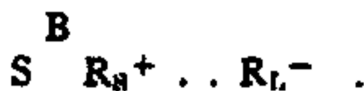
The utilitarian and informational reinforcements of impulse buying can maintain or even strengthen this behaviour because they are immediate. Whether it is the pleasure of obtaining the goods or that of receiving social admiration, reinforcements come immediately after the impulse buying behaviour. Skinner (1986) argues that in most modern cultures, more and more practices and developments are aimed at increasing immediate reinforcement. The truth holds with consumption, the advance of credit card use, cash machines and online shopping, which can also be seen as the designs for consumers to shop immediately and eventually to encourage impulse buying behaviour (Bayley & Nancarrow, 1998).

On the other hand, the punishments or aversive consequences of impulse buying mostly take effects after a longer period of time. The negative consequences reported by impulse buyers include dissatisfaction with the item and feeling guilty or regret (Rook, 1987; Beatty & Ferrell, 1998). Most importantly, money loss or financial problems appear to be the main source of consumers' regret or guilt after impulse buying behaviour (Rook, 1987; Hoch & Loewenstein, 1991). However, the negative consequences or punishment of impulse buying, although they might be serious and severe, do not come immediately after the impulse purchase. It takes some time for a

consumer to realize that the item is not suitable or useful, and consumers who purchase with credit cards will not see their bank statement until the end of the month. It is often much later that consumers start to face the effects of punishments, such as financial problems or unsuitable goods.

Skinnerian behaviourism emphasizes that behaviour is often shaped more by immediate consequences than by long-term ones (Platt, 1973). Even though consumers do experience regret in the later future, their impulse buying is still maintained by the immediate reinforcement of the purchase, rather than punishment. Behaviourists call this type of contingency the “trap of reinforcement” (Platt, 1973; Baum, 2002). As the figure below shows, reinforcement (R+) comes immediately after a behaviour (B), whilst punishment (R-) follows later. Therefore, the behaviour is mostly driven by immediate reinforcement and is more likely to occur again in a similar setting. In other words, impulse buying behaviour is more likely to occur and be maintained in normal consumers because of the presence of immediate reinforcement and the absence of instant punishment.

Figure 3: The Reinforcement Trap



Source: Platt (1973)

This is similar to other impulsive behaviours, such as smoking or binge drinking: the immediate reinforcement of these behaviours includes the biological response to the cigarette or the alcohol and the social needs. The punishment of these behaviours, however, although it has less control over the actual behaviours and occurs much later, may be even more serious. This may explain why impulse buying is still an upward trend, even though most consumers report regret in several studies (Rook, 1987; Hausman, 2000).

This study thus argues that in the current consumption environment, in which shopping is both easy and socially reinforced, impulse buying behaviour is more likely to become a shopping pattern of consumers, due to the effect of immediate reinforcement and the absence of instant punishment. This view may further complement the existing impulse buying literature with an interesting point: regretting one's own impulse buying behaviour may have little effect on the future impulse buying choice of an individual. In addition to reinforcement, it is also worth investigating the role of "regret" in the consumer impulse buying choice, as this angle has not yet been widely introduced.

Study Proposition 5: Both utilitarian and informational reinforcements have effects on impulse buying behaviour.

2-2-5 Consumer situation and the BPM matrix

Impulse buying researchers suggest that further research should investigate the impulse buying tendency in different shopping situations, in order to generate the behaviour (Jones et al, 2003). While several previous impulse buying researchers have assumed that the impulse buying tendency is consistent across various situations (Rook & Fisher, 1995; Beatty & Ferrall, 1998), some studies have also shown that there can be situational influences that have an effect on impulse buying behaviour. For instance, one study shows that consumers are more likely to buy on impulse and spend more money when they experience self-regulatory depletion (Vohs & Faber, 2007).

For example, you are offered a piece of chocolate cake in the morning, but because you are on a diet, you choose not to eat it. However, at the end the day, after hours of tiring work in the office, you might pick up that piece of cake and have a bite: you are too exhausted to fight the desire any more. This evidence implies the importance of situational factors of impulse buying. When we are exposed to a specific buying situation, we are more likely to buy on impulse. However, there are a great many situational factors that can have an effect on human behaviour. It is difficult for researchers to illustrate them all.

The BPM matrix provides a systematic way to illustrate different consumer situations. The consumer situation in the BPM is defined as the meeting point of the consumer current behavioural setting and the learning history, in which consumer behaviour occurs (Foxall, 1990). Belk (1978) describes a “situation” as a particular point in time and space. However, this definition of a “situation” could also lead to some confusion. For example, the food hall in Harrods might be considered as a nice treat for some consumers, but it may be a place for routine food shopping for other consumers. It is a specific place, and consumers might visit it at the same time, but the type of shopping situation it qualifies as still depends on the consumer behaviour within this specific time and place.

A consumer situation is thus more specific than a consumer behavioural setting or the definition described by Belk (1978). It is formed not only by a behavioural setting, which signals possible utilitarian or informational reinforcement, but also by the consumer’s learning history, which determines the actual discriminative stimuli of behavioural response for the individual. Foxall (1992) identifies four types of consumer behaviour by the level of utilitarian/informational reinforcement received; these are accomplishment, hedonism, accumulation and maintenance. To rephrase the example above, visiting the Harrods food hall could be a maintenance consumption situation for some consumers, but it could also be a hedonism or even an accomplishment situation for other consumers. The details of each type of situation of the BPM are introduced below.

Accomplishment consumption, which is maintained by high levels of utilitarian and informational reinforcement, represents consumption that highly achieves both economic and social purposes. For instance, when purchasing a really luxury car, consumers are drawn by the actual car itself (the look, the engine) as well as the symbolic meaning of the expensive car, which may show the high social status or the good taste of the consumer.

Hedonism consumption is normally defined as “consumer behavior that relates to the multi-sensory, fantasy, and emotive aspects of one’s experience with products” (Hirschman & Holbrook, 1982:p.92). In the BPM matrix, hedonism refers to consumer behaviour that receives highly utilitarian reinforcements, whilst informational reinforcements are less influential or absent in this category. Take smoking a cigarette as an example; consumers themselves might actually receive satisfaction, although this behaviour might not be approved of or praised by others.

Consumer behaviours that involve saving and collecting are classified as accumulation in the BPM matrix. These could be putting money into a savings account, installment buying and collecting coupon or points. These behaviours are labelled by high informational but lower utilitarian reinforcement. Finally, maintenance is the consumer behaviour that fulfils basic needs, such as regular food shopping or paying tax. The behaviours within this situation normally receive lower utilitarian and informational reinforcement than other types of consumption, but represent the social or economic duties of a consumer in a society (Foxall, 1992).

Closed and open settings

While operant theory is normally tested on animals in laboratory experiments (Kimble, 2001), human behaviour is often too complex to be described in the sense of such a closed setting (Foxall, 1994). In the BPM, the behavioural setting is thus further explained as a continuum, ranging from the most closed to the most open setting. The distinction between a closed and an open setting is the degree to which behaviours can be controlled by contingencies (Foxall, 1992). Relatively closed settings are defined as those settings in which the contingencies of reinforcement are more controlled by marketers or other agents. Such environmental settings are designed with salient contingencies, which encourage the conformity of behaviour response. Consumer behaviour in a closed setting can therefore be more easily predicted and controlled. For example, consumers on a flight are only able to have certain meal or in-flight entertainment options, all of which are provided by the airline. Closed settings can also be formed by social or regulatory factors. For instance, under social pressure, a

consumer might need to go to a birthday party with a gift, as other people are doing so, or it is required to purchase road tax so that people can drive legally. Closed settings thus often lead to negatively reinforced behaviour (Foxall & Greenley, 1999).

An open setting refers to an environmental setting that lacks such controls. While closed settings provide specific reinforcement if consumers perform the expected behaviour, the contingencies in an open setting are more difficult to identify through manipulating or controlling antecedent stimuli (Foxall, 1990). This means that consumer behaviour is harder to predict, since consumers have a greater range of choices and more control over their actions, such as the options of browsing and switching products or brand choice. In other words, instead of engaging in behaviour that is constrained by certain reinforcers provided by marketers as in a closed setting, consumer behaviour in an open setting can be encouraged by a variety of reinforcements. Therefore, an individual's learning history has a greater influence on his or her behaviour in an open setting (Foxall, 1994). For example, when a consumer enters a department store, the environment provides him/her with plenty of brands or product choices. Therefore, it is more difficult for researchers to explain or predict this consumer behaviour accurately in an open setting.

These four types of consumer behaviours are further developed into eight consumption situations based on the degree of open or closed setting (Foxall, 1992; Foxall & Greenley, 1999; Foxall & Yani-de-Soriano, 2005), as shown in the table below. The accomplishment behaviour in an open setting (status consumption; e.g. luxury shopping) is a different situation from this behaviour in the closed setting (fulfilment; e.g. gambling in a casino). The maintenance behaviour in an open setting can be illustrated as "routine purchasing", such as routine grocery shopping, while such behaviour in a closed setting is defined as "mandatory consumption", such as paying taxes. In their study, Foxall and Greenley (1999) successfully give examples of these situations and test them with the PAD framework (Mehrabian & Russell, 1974), which further establishes the validity of the BPM matrix.

Table 3: The BPM Contingency Matrix*Source: Foxall and Greenley (1999)*

	<i>Closed Setting</i>	<i>Open Setting</i>
Accomplishment (high utilitarian, high informational)	Contingency Category 2 Fulfilment (e.g. gambling in casino)	Contingency Category 1 Status Consumption (e.g. luxury shopping)
Hedonism (high utilitarian, low informational)	Contingency Category 4 Inescapable Entertainment (e.g. in-flight entertainment)	Contingency Category 3 Popular Entertainment (e.g. watching TV)
Accumulation (low utilitarian, high informational)	Contingency Category 6 Token-Based Consumption (e.g. frequent-flier scheme)	Contingency Category 5 Collecting (e.g. saving)
Maintenance (low utilitarian, low informational)	Contingency Category 8 Mandatory Consumption (e.g. paying taxes)	Contingency Category 7 Routine Purchase (e.g. grocery shopping)

The BPM matrix and impulse buying

One of the knowledge gaps in the existing impulse buying literature is that this specific consumer behaviour has not been examined and compared in various shopping situations. Most research has focused on investigating impulse buying behaviour in certain specific situations (Herabadi et al, 2009). Although researchers argue that impulse buying behaviour is influenced by situational factors (see: Verplanken & Herabadi, 2001; Vohs & Faber, 2007), and it is commonly understood that routine food shopping in a supermarket is different from a shopping trip to a mall, impulse buying behaviour across all different types of shopping situation has not yet been compared together in the literature. However, it is important to examine the shopping situation while studying impulse buying, as the nature of impulse buying has been proven to be strongly linked with situational factors (see: Rook, 1987; Verplanken & Herabadi, 2001; Vohs & Faber, 2007).

For example, impulse buying has been studied in an airport setting, and the researchers argue that there are several situational factors that can lead to impulse buying. These include spending leftover foreign currency, buying gifts for friends/family at the last minute and killing time (Crawford & Melewar, 2003). This study reveals that even within the same environment, there are different impulse buying situations for each consumer. In other words, individual consumers each have varied reasons to buy based on their current situation, even if they all occupy the same physical environment. Therefore, impulse buying behaviour should be compared across different shopping

situations, in order to understand the different kinds of situations likely to trigger impulse buying.

One reason why it is difficult to investigate different impulse buying situations may be that various situational factors are said to create a temporal motive for individuals to buy on impulse (Verplanken & Herabadi, 2001). However, it is rather difficult and less systematic to test each consumer's motive across these varied situations. Another reason why there is a lack of such studies may be that it is difficult to map out specific situations that represent and include all types of consumption with a proper theoretical framework. The BPM matrix may therefore be a promising tool to fill this knowledge gap, as the BPM matrix maps out eight consumption situations based on behaviourism theory, which describe the relatively different levels of reinforcement expected after each consumer behaviour.

Foxall (2010) argues that continuous consumer behaviour progresses from routine purchasing to hedonism, which reveals the route of consumer choice from self-control to impulsivity. He suggests that unplanned purchasing, although more likely to happen in routine shopping situations, does not mean impulsivity, as the utilitarian and informational reinforcement or punishment in this situation appears to be too low to cause a discounting effect. However, there is evidence of impulse buying behaviour in the supermarket (Han et al, 1991; Zhou & Wang, 2004). As these buying behaviours in supermarkets might be unplanned, they are also likely to be impulsive choices. Whether they are unplanned buying or impulse buying would depend on individual factors. For example, although the aversive cost of buying a chocolate bar is so low that it could not represent a discounting effect from the economics view, if this consumer has been on a special diet for health reasons, then grabbing a chocolate bar qualifies as an impulsive choice in this case. Therefore, this thesis argues that routine shopping can be a situation for impulsive choices as well.

Foxall (2010) states that more social approval of behaviour enters when the route of continuous consumer behaviour passes accumulation, and finally impulsivity would

reach its height as a likely addiction, as hedonism consumption brings more of a pleasure factor to the situation. This view fits with the previous literature, which argues that impulse buying nowadays has become a form of entertainment for consumers (Dittmar et al, 1996), as impulse buying serves as a novelty-seeking, fun and thrilling experience for consumers (Hausmann, 2000).

Moreover, Foxall (2010) argues that this route from hedonism to an open setting of accomplishment consumption is the route to recovery, which implies that an impulsive consumer choice is unlikely to happen within the accomplishment consumption. Since impulse buying has been found to be encouraged by praise from others and the products that represent symbolic consumption (Dittmar et al, 1995; Burroughs, 1996; Dittmar & Drury, 2000), higher informational reinforcement is thus also evident in the impulse buying literature, which implies that impulse buying behaviour may occur within the accomplishment situation as well.

For instance, expensive and symbolic items, such as jewellery, are often bought on impulse (Bellenger et al, 1978). It is therefore logical to assume that as long as a consumer can afford the item at that moment (even with a credit card), impulse buying behaviour is still likely to occur in the situation of accomplishment. In fact, “impulse buying” has been found to be associated with purchases of luxury goods (Hauck & Stanforth, 2007). Therefore, as long as consumers can take the item and pay for it at the checkout, it appears that impulse buying can happen anywhere and in any situation.

Since impulse buying behaviour can occur in any consumer situation, it is worth investigating which types of consumers are likely to impulse buy in which types of situations. As discussed before, the definition of a consumer situation in the BPM is different from other definitions provided by other consumer researchers, as the learning history of the consumer plays a significant role in defining consumer situations by identifying the level of reinforcements and punishments. Radical behaviourism can be useful in examining the situational influences, as well as in investigating the situational influences on attitude formation and attitude–behaviour consistency under the scope of

the environmental setting (Foxall, 2007a; Foxall, 2007b). By revealing the interaction between consumer behaviour, its situation and the consumer learning history, the variety of an individual's behavioural patterns can be identified. In other words, different types of impulse buying behaviour can be identified and explained by investigating individuals' impulse buying choice in a specific situation and the corresponding learning history variables.

Foxall (2010) predicts that impulsivity is most unlikely to be in the situation of accomplishment behaviour. Although this type of behaviour has high utilitarian and informational reinforcements as consequences, it also implies a high aversive cost. Therefore, if an individual makes an impulse buying choice in such a situation, it may be because this individual has higher levels of impulse buying tendency and impulsivity traits than other consumers.

As accomplishment behaviour such as buying from luxury stores not only results in the practical benefit of owning the luxury product, the high informational reinforcement also serves to boost self-esteem through obtaining positive social feedback (Foxall, 1999; Yani-de-Soriano & Foxall, 2006; Yermekbayeva, 2011). More specifically, boosting self-esteem with impulse buying is well documented by researchers (Rook, 1987; Mick, 1996; Bayley & Nancarrow, 1998; Dittmar & Drury, 2000; Phau & Lo, 2004) as well as in compulsive buying studies (Valence et al, 1988; O'Guinn & Faber, 1989; Hanley & Wilhelm, 1992; Yurchisin & Johnson, 2004).

High levels of informational reinforcement may thus be linked to high levels of impulse buying tendency and impulsivity, as it could even enhance impulse buying behaviour to its excessive form: compulsive behaviour. Therefore, this study predicts that the impulse buying choice in accomplishment behaviour situations may be predicted by an individual's impulse buying tendency and impulsivity traits.

Hedonism behaviour is a behaviour that is driven by high utilitarian reinforcement and has been predicted as the consumption behaviour that is the most likely to become an

addiction (Foxall, 2010). For instance, behaviours such as smoking and drinking have relatively low informational reinforcements but higher utilitarian reinforcements, and these behaviours often develop into addiction. According to Rook and Gardner (1993), the word “pleasure” is the word most frequently associated with an impulse buying experience. Similarly, smokers have been found to anticipate “pleasure” from their smoking behaviour (Billieux et al, 2007). The impulse buying tendency can be expected to be positively related to hedonism behaviour, as it is established in the previous part of this chapter that utilitarian reinforcements can lead to impulse buying behaviour. On the other hand, UPPS has been studied with hedonism behaviour, including drinking and smoking, and urgency has been found to be the strongest predictor of this type of behaviour in several studies (Billieux et al, 2007; Billeux et al, 2008a; Cyders et al, 2008; Spillane et al, 2010). Therefore, this study also proposes urgency of UPPS as a strong predictor of the impulse buying choice in the hedonism consumption situation.

As for accumulation behaviour, such as saving and collecting, it is suggested to be a consumer behaviour driven by mainly informational reinforcement (Foxall et al, 2006; Foxall, 2007a). Notably, the informational reinforcement here would be different from the informational reinforcement in accomplishment situations. The informational reinforcement of accomplishment behaviour might stem from the status symbolic perspective, whilst the informational reinforcement in accumulation behaviour is described more as social approval or social norms (Yermekbayeva, 2011). Impulse buying behaviour, although it may be encouraged by peers (Luo, 2005), has also been associated with guilty feelings and negative social comments such as “immature” (Rook, 1987; Bayley & Nancarrow, 1998; Hausman, 2000). It can therefore be said that impulse buying behaviour is not as reinforced by social approval as other accumulation behaviours. However, impulse buying behaviour could still happen in this situation, if an individual has always been an impulse buyer.

Moreover, impulsivity traits such as premeditation and perseverance may be more related to impulse buying behaviour in this situation than other facets of UPPS. Both

urgency and sensation seeking imply the act of seeking reward. However, accumulative situations, compared with hedonism situations, offer consumers relatively low levels of pleasure. Therefore, this study predicts that the impulse buying choice in this situation is positively related to individuals' impulse buying tendency, but negatively related to their premeditation and perseverance scores.

The maintenance type of impulse buying, such as impulse buying behaviour in supermarkets, has been studied in the previous literature (Stern, 1962; Kollat & Willet, 1967; Abratt & Goodey, 1990; Zhou & Wong, 2004). Entering the store "unplanned" appears to be the first step of this type of impulse buying; for some consumers, it could even be the way they carry out their routine shopping (Stern, 1962; Kollat & Willet, 1967). This study thus predicts that not only is the impulse buying tendency positively related to the impulse buying choice in a maintenance situation, the individual levels of premeditation may also predict the impulse buying choice in such a situation.

To conclude, after reviewing the previous literature on impulse buying, this author finds evidence that impulse buying behaviour can occur in various situations. The table below shows the examples of impulse buying research applied to different consumption situations. As we can see, not only can impulse buying occur during a routine shopping trip to a supermarket, it can also happen in an airport, a restaurant and certainly a shopping mall, where consumers can buy almost everything. This view further develops the question of whether the impulse buying tendency can be expected to influence behaviour across various situations (Rook & Fisher, 1995; Beatty & Ferrell, 1998; Park et al, 2006). In the same fashion, individual impulsivity traits, such as urgency and premeditation, may also have effects on impulse buying choice in different situations. In the BPM, such variables are included as the individual learning history. In other words, impulse buying behaviour can occur in *any* situation in which immediate reinforcement has been signalled, and the frequency with which this behaviour occurs should be influenced by the individual learning history. Therefore, this thesis argues that further investigation into impulse buying behaviour using the BPM matrix should be conducted to address this issue.

Table 4: Examples of Impulse Buying Research and Situations

Setting	BPM Matrix	Author
Shopping in the mall	Open, routine/hedonic/luxury shopping	Bellenger et al (1978); Beatty and Ferrell (1998); Weun et al (1998); Tendai and Crispen (2009)
Wine purchase in restaurant	Closed, hedonic/status consumption	Todd (1996)
Airport	Closed, inescapable entertainment	Omar and Kent (2001); Crawford and Melewar (2003)
Supermarket	Open, mostly routine shopping	Shaffer (1960); Kollat and Willet (1967); Zhou and Wang (2004); Peck and Childers (2006)
Gift/task shopping	Closed	Scammon et al (1982)

Study Proposition 6: Impulse buying behaviour can occur in all eight situations within the BPM matrix.

6-1: The impulse buying choice in the accomplishment situation is positively correlated with an individual's impulse buying tendency and impulsivity traits.

6-2: The impulse buying choice in the hedonism situation is positively correlated with an individual's impulse buying tendency and urgency scores.

6-3: The impulse buying choice in the accumulation situation is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation and perseverance scores.

6-4: The impulse buying choice in the maintenance situation is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation scores.

2-3 Study Propositions

To conclude Chapter 2, this thesis proposes to investigate the following six study propositions:

Study Proposition 1: Consumer behavioural setting elements significantly influence the consumer impulse buying choice.

The thesis aims to study impulse buying through the view of behaviourism, which focuses on identifying the relationship between the external environment and behaviour. After reviewing the previous impulse buying literature, the present author argues that physical, social, temporal and regulatory factors in a current consumer behavioural setting can all signal reinforcements of impulse buying to consumers. Utilitarian reinforcement may be signalled by product attributes and physical surroundings, while social, temporal and regulatory factors may be related to informational reinforcements, such as social status and consumer performance.

Study Proposition 2: Impulse buying tendency as learning history is positively correlated with the consumer impulse buying choice.

Impulse buying behaviour should be seen as a shopping behavioural pattern. Therefore, the impulse buying tendency can be seen as one of the main individual variables that can distinguish impulse buyers from non-impulse buyers. As the impulse buying tendency is measured by consumers' attitude and past shopping experience, this study thus includes the impulse buying tendency as individual learning history. Therefore, individuals who have a higher impulse buying tendency should exhibit a more solid behavioural pattern of impulse buying.

Study Proposition 3: Impulsivity as learning history is significantly related to consumer impulse buying choice.

SP3-1: Urgency is positively correlated with the consumer impulse buying choice.

SP3-2: Premeditation is negatively correlated with the consumer impulse buying

choice.

SP3-3: Perseverance is negatively correlated with the consumer impulse buying choice.

SP3-4: Sensation seeking is positively correlated with the consumer impulse buying choice.

Impulse buying as a behavioural pattern also establishes the link between impulse buying and individual personality traits, especially impulsivity. Therefore, this study proposes that individuals' impulse buying behavioural pattern can be reflected by each facet of the UPPS. People who have higher urgency and sensation seeking are expected to be more frequent impulse buyers than others. On the contrary, individuals with higher premeditation and perseverance scores are expected to make fewer impulse buying choices than other consumers.

Study Proposition 4: There will be cultural differences in consumers' impulse buying choice. British consumers will make more impulse buying choices than Taiwanese consumers.

In order to understand impulse buying behaviour in a social environment, this study further argues that individual cultural background should be included as one of the learning history variables, so that impulse buying behaviour can be examined not only as an individual behaviour, but also as a behaviour that is maintained and evolves within a social group. The previous literature has shown that consumers from individualism countries are more likely to engage in impulse buying, while the impulse buying behaviour of collectivist consumers is more greatly controlled by social influences (Doran, 2002; Kacen & Lee, 2002; Lee & Kacen, 2008; Yu & Bastin, 2010). Therefore, these differences may also be expected in this study regarding British and Taiwanese consumers. This study therefore proposes that there will be cultural differences in impulse buying behaviour, and British consumers will be more likely to make impulse buying choices than Taiwanese consumers.

Study Proposition 5: Both utilitarian and informational reinforcements have effects on consumer impulse buying behaviour.

Immediate reinforcement is the main drive behind impulse buying behaviour. Based on the previous findings in the literature, various products can be bought on impulse, whether they are functional or symbolic products. This study thus argues that both utilitarian and informational reinforcements can trigger impulse buying behaviour.

Study Proposition 6: Impulse buying behaviour can occur in all eight situations within the BPM matrix.

6-1: The impulse buying choice in the accomplishment situation is positively correlated with an individual's impulse buying tendency and impulsivity traits.

6-2: The impulse buying choice in the hedonism situation is positively correlated with an individual's impulse buying tendency and urgency scores.

6-3: The impulse buying choice in the accumulation situation is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation and perseverance scores.

6-4: The impulse buying choice in the maintenance situation is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation scores.

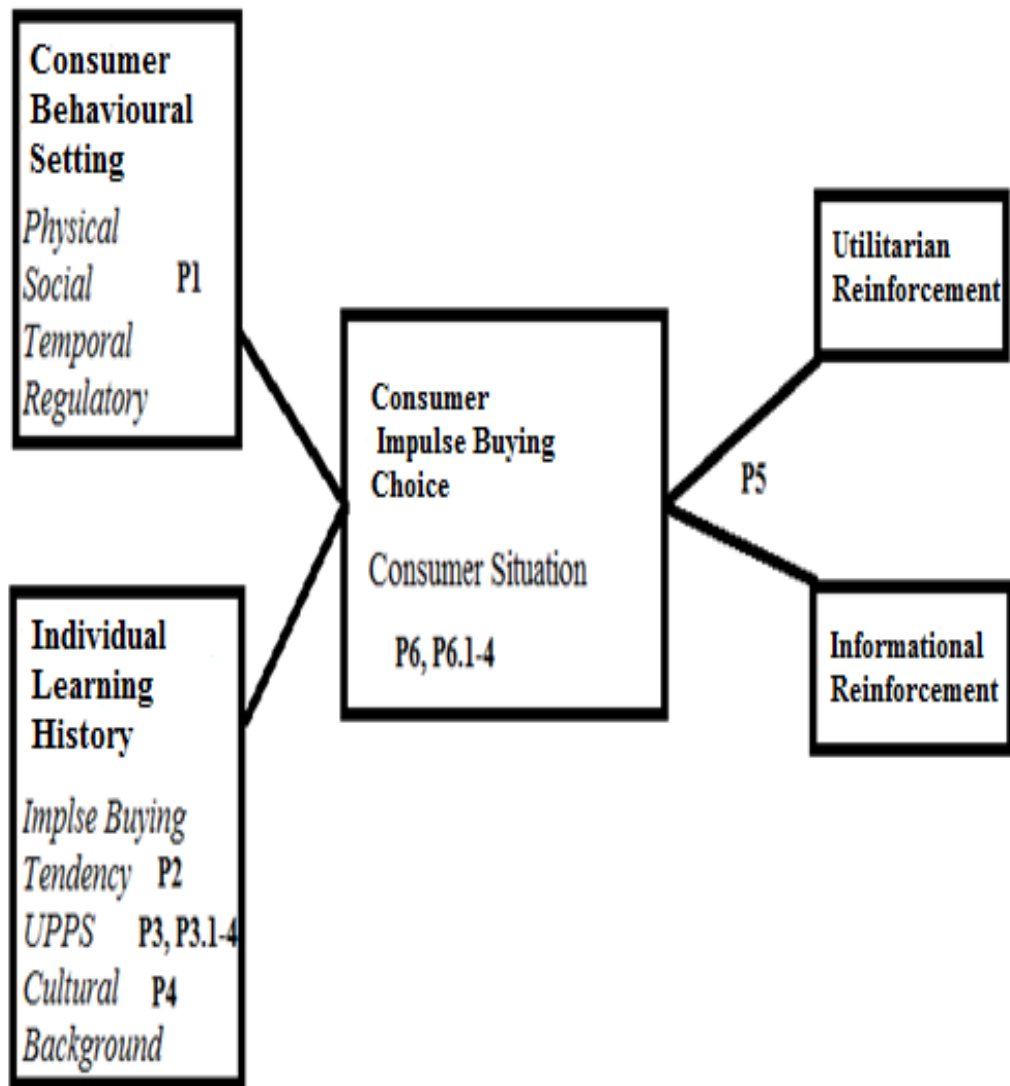
The previous literature has explored impulse buying across different situations. One knowledge gap in the previous impulse buying literature is that this behaviour has not been investigated across various situations at the same time. Based on the former findings regarding impulse buying, this study proposes that impulse buying may occur in all eight situations in the BPM matrix, since the evidence of both utilitarian and informational reinforcements can be found in the previous impulse buying literature. Moreover, in the view of the BPM, the consumer choice results from a specific consumer situation created by the consumer behavioural setting and the individual learning history. This study therefore proposes that investigating an impulse buying choice in a specific consumer situation can reveal a pattern of consumer impulse

buying. In other words, the types of impulse buyers who are more likely to appear in a specific situation can be illustrated by examining the consumer impulse buying choice in the BPM matrix.

Conclusion

To conclude, this chapter has provided a behavioural view of impulse buying behaviour using the theoretical framework of radical behaviourism and the BPM. Impulse buying is a continued behavioural pattern driven by immediate reinforcement. This chapter has explained the BPM and how each component of the BPM may play a role in these behavioural patterns. Therefore, the research objectives derived from the literature review of this thesis include 1) to integrate the antecedences of impulse buying behaviour by examining the effects of the consumer behavioural setting and individual learning history, such as impulse buying tendency, impulsivity and cultural background; 2) to examine impulse buying as a continued behavioural pattern that has different facets in response to a variety of consumption situations; 3) to reveal systematically the situational influence of impulse buying based on the BPM matrix and the reinforcement corresponding to these situations. Lastly, the BPM allows impulse buying behaviour to be examined from the pre-purchase stage to the post-purchase stage, which may provide a more complete view of this behaviour. The study propositions were developed based on the roles of each BPM element in impulse buying behaviour. The study propositions are illustrated by the model below.

Figure 4: The Study Propositions and the BPM model



Chapter 3 Methodology

Introduction

This research aims to explain impulse buying behaviour from a behavioural perspective by specifically applying the BPM. In Chapter 1, the existing impulse buying literature was introduced and the research gaps identified. More specifically, this study intends to explore the situational influences on impulse buying behaviour and to identify different types of patterns of impulse buying behaviour. The application of the BPM may thus be useful in addressing these knowledge gaps, as the BPM offers a theoretical and systematic way to examine consumer behaviour in relation to a variety of situations and behaviour patterns, based on the operant theory. Chapter 2 illustrated how the BPM may be appropriate for explaining impulse buying behaviour. Each component of the BPM was also introduced and discussed in relation to impulse buying behaviour. The BPM was proposed to serve as an integrative model to explain impulse buying behaviour from the pre-purchase stage, to the behaviour and its situation, to the post-purchase consequences.

The research gaps in the impulse buying literature and the perspective of radical behaviourism contributed to the development of the research propositions for this study. These include the ways in which various external factors or situations can influence the occurrence of impulse buying behaviour, and whether impulse buying behaviour is a behavioural pattern that can be predicted by an impulsive personality and an individual's past experience. This thesis also proposes that impulse buying behaviour should be examined at both micro (individual) and macro (social group) levels. This study therefore aims to analyse impulse buying behaviour using cross-cultural data. Chapter 2 concludes with eight study propositions according to the variables of the BPM.

This chapter aims to introduce this study's research design and methodology. As this consumer research is being conducted from a behaviourist's viewpoint, this chapter begins with a short introduction to the methodology of behaviourism. Since laboratory experiments are often criticized as being unable to represent realistic consumer settings,

this study proposes to apply a quantitative research method: a questionnaire survey. The primary data collection began with a pre-study interview, which provided not only an insight into the ways in which the BPM can explain impulse buying through consumers' own language and experiences, but also evidence for survey development. The main study was designed as a questionnaire based on the BPM. The details of the questionnaire design, sample and distribution are also discussed in this chapter.

3-1 The Methodology in the View of Radical Behaviourism

3-1-1 Skinner's philosophy of science

Research in social science is broadly divided into two paradigms – interpretivism and positivism. It is the positivist viewpoint that has been linked to behaviourism. The interpretivist paradigm measures the degree to which individuals sense the society and its activities and concentrates on understanding and interpreting knowledge through those individuals' experiences. Interpretivism is thus usually linked to qualitative methods. On the other hand, positivists hold the epistemology that the objective reality exists beyond human minds, and argue that social science should follow the philosophy of other natural sciences, such as chemistry or physics. Positivists argue that social science research cannot match the achievements of the natural sciences in explanation, prediction and control, unless the methods of the natural sciences are applied to it (Lee, 1991). Positivists claim that the knowledge of a fact or a cause should be explicable by direct experiential contact with the phenomena with little regard for the subjective states of individuals (Bogdan & Taylor, 1975, cited by Deshpande, 1983; Moore, 1983). Therefore, the positivist paradigm focuses on description and explanation and is often linked to quantitative methods.

As for behaviourism, Watson (1913) states that psychology should also be seen as an objective experimental branch of the natural sciences; the goal of science should be the prediction and control of a behaviour (p.158), and it is the observable behaviour that should be investigated. It is clear, therefore, that Watson and his branch of behaviourism are indeed influenced by the positivist paradigm. Skinner also admits the

connection between positivism and his work by stating “It is positivistic. It confines itself to description, rather than explanation. Its concepts are defined in term of immediate observation ...” (Skinner, 1938:p.44, cited by Moore, 1983). In summary, since behaviourism also focuses on “scientific” and “observable” research methods and interpretation, it is often regarded as positivistic (e.g. see Baum, 1974; Anderson, 1986; Shrimp, 1989). As a behaviourist, Skinner’s work is also influenced by a certain level of positivism. However, it is worth noting that Skinner does not approve of all positivist paradigms. He separates himself and his radical behaviourism from methodical behaviourism and some versions of logical positivism, as they completely rule out private events on the exact contrary to mentalism (Skinner, 1974). Skinner’s radical behaviourism restores the balance between these two paradigms; he states:

It does not insist upon truth by agreement and can therefore consider events taking place in the private world within the skin. It does not call these events unobservable, and it does not dismiss them as subjective. It simply questions the nature of the object observed and the reliability of the observation. (Skinner, 1974:p.18)

Radical behaviourism can therefore be seen as more flexible than Watson’s behaviourism and logical positivism, as it allows for the existence of private events such as thoughts and feelings. They are considered as one form of human behaviour by radical behaviourists. This viewpoint not only separates radical behaviourism from other forms of behaviourism and logical positivism, but also provides a hint foreshadowing that the research methods of radical behaviourism can be more flexible than those methods using traditional Watsonian behaviourism.

Skinner’s radical behaviourism is heavily influenced by Ernst Mach’s biological positivism, which encouraged Skinner to develop an indigenous, behaviourally based epistemology and to include Darwinian biology as a foundation of human behaviour analysis (Smith, 1986; O’Donohue & Ferguson, 2001). Moreover, these two scholars both see the goal of scientific research as a search for causal relations, which are best

explained as functional relationships between variables. Corresponding to Mach, Skinner holds the concept that scientific explanations should be found in descriptions, which can integrate and summarize relations. In other words, the explanation system of radical behaviourism is data-driven. To conclude, the philosophy of the science of radical behaviourism is not theory-driven, nor hypothetico-deductively derived. Instead, it is the development of a descriptive and integrative system of inductively derived principles (Chiesa, 1992).

3-1-2 The research method and the datum of radical behaviourism

In Skinner's operant theory, observations focus on the relationship between discriminative stimuli, the operant response and its consequences. In order to observe and test the operant response, the principal method of operant behaviour analysis has long been laboratory experiments with animals, such as studying a rat in an operant conditioning chamber, or so-called "Skinner box". As for human research, behaviourists believe that the causes of human behaviour can be found in the environment, in other words, the proper experimental setting, and the investigation of the behaviour can be determined if the relation between the operant behaviour and its antecedents and consequences can be proven to be as lawful as possible (Delprato & Migley, 1992). In other words, the scientific explanation for human behaviour therefore lies within the probability of the occurrence of a behavioural response in a manipulated setting. However, the probability cannot be measured directly, only the rate of responding, and so, among all the dimensions of behaviour including rate or duration, the responding rate of the behaviour is seen as the fundamental datum of Skinner's behaviourism (O'Donohue & Ferguson, 2001; Bailey & Burch, 2002). The rate of response is thus a crucial part of behavioural analysis, as Skinner writes:

... in operant conditioning we strengthen an operant in the sense of making response more probable or, in actual fact, more frequent. (Skinner, 1953:p.65)

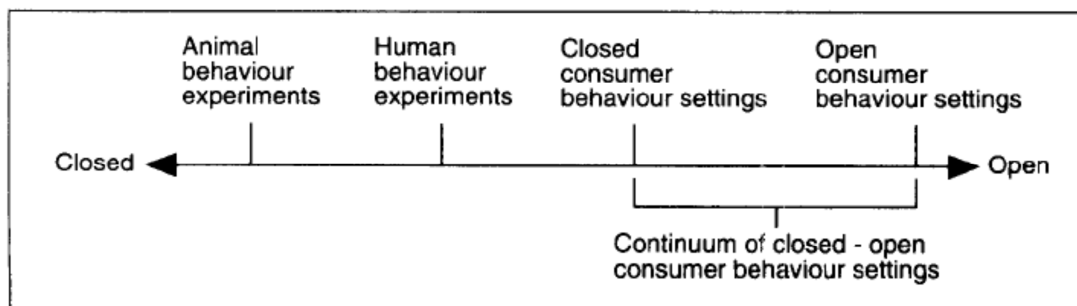
This concept also leads to another characteristic of the original research method of behaviourism, which is to apply the study to a single organism instead of a group of animals or a population in order to determine whether the rate of responding is functional or lawful (Skinner, 1963). To conclude, the responding rate of the behaviour serves as the fundamental datum of radical behaviourism, since it determines the lawful and functional relationships between a behaviour and its variables. Skinner further provides the concept of “quantitatively mutually replaceable”, which means that the ways in which organisms perform this response may vary occasionally, but that this does not affect the lawful relationships between this responding behaviour and its determining variables (Smith, 1986). The focus is on determining that the subject organism actually responds with a certain behaviour (e.g. pressing the lever in a Skinner box or impulse buying in a certain setting) to its variables at a lawful rate. The focus is less on the way in which the organism performs this responding behaviour (e.g. pressing the lever with a nose or paw, or impulse buying in-store or online).

3-1-3 Consumer research and behaviourism: From the closed to the open setting

The methodology of radical behaviourism can be briefly concluded as 1) usually taking place in a laboratory experiment; 2) emphasizing the experimental control of the given behaviour; and 3) considering the rate of responding as the fundamental datum. Traditionally, behaviourists hold the view that the main task of human operant research is to determine the conditions under which principles discovered with animals also hold true for a human sample (Hake, 1982). This means that the focal issues of human operant research are the ways in which the results found in laboratory experiments with animals should be interpreted and applied to human behaviour. Foxall (1987; Foxall, 1994) thus states that there is a methodological issue when applying operant theory to marketing: although most scholars agree that studying animal behaviour in a laboratory setting provides helpful insights into human behaviour, the main point is that human behaviour is often rule-governed rather than contingency-shaped. To conclude, the main methodological issues in applying radical behaviourism to consumer research can be illustrated by the figure shown below. Experiments on animal behaviour, which are conducted in the most closed setting, provide researchers with the most control over

the experimental variables. It is thus relatively easy for researchers to identify the relationship between a behavioural response and its reinforcers. On the other hand, when comparing animal and human experiments, the consumer behavioural settings in the reality make it more difficult for researchers to identify the elements of Skinner's three-term contingency; however, this does not mean that researchers have abandoned the idea that behaviour is influenced by its consequences (Foxall, 1993).

Figure 4: Continuum of the Consumer Behaviour Setting *Source: Foxall (1993)*



Foxall (1993) points out that one of the main independent variables of the BPM is the continuum of closed–open consumer behaviour settings. As the above figure shows, consumer behaviour may be more possible to predict and control, but as the setting becomes increasingly open, that behaviour moves further and further away from the the original control ability of the operant behaviourism based on animal behaviour experiments. In the field of behavioural analysis, those studies involved with animal experiments and the Skinner box are classed as “experimental behavioural analysis”, while others that focus on human samples and their social behaviour are called “applied behavioural analysis” (ABA) (Cooper et al, 1987). The operant behavioural research paradigm can thus be seen as a continuum, stretching from the dimension of basic experimental research to applied behavioural research (Hake, 1982).

3-1-4 Consumer research and behaviourism: Applied behavioural analysis

At the beginning of the operant research, studies were conducted using a single animal sample in a Skinner box, in which the researchers have absolute control of the setting

(e.g. Skinner, 1938). Later, operant studies were performed with small numbers of human samples in semi-controlled settings, such as students in a classroom (e.g. see Lindsley, 1991). Today, ABA focuses on human social behaviour using a group of subjects in an actual social setting. It is ABA that may be the most suitable bridge to connect radical behaviourism and consumer research.

The aim of ABA is to investigate behaviour that is socially important (Baer et al, 1968; Hake, 1982; Cooper et al, 1987), and this kind of behaviour is rare in a laboratory setting. A laboratory setting is usually designed by researchers so that experimental control over variables is as easy as possible (Hake, 1982; Burns & Bush, 2002). However, research into a socially important behaviour in a social setting is more difficult to conduct in a laboratory setting. The view of Skinner is that behaviour is quantitatively in order, and that scientists' task is to demonstrate such order (Coleman, 1987). In a basic experimental behavioural analysis involving a single animal, such order has been called "quantitatively mutually replaceable" (Smith, 1986). In ABA, this concept is echoed by the idea of "generality", in which the principle is still the description of the functional relationships between a behaviour and its controlling variables. Baer (1978) describes the principles of ABA as:

It is in exactly the loose, largely uncontrolled settings in which social problems are analyzed that screening for generality should occur. Generality will determine the basic importance of any variable, reinforcement-based or otherwise. To put it differently, what works on the social problems is what deserves to be counted among the most fundamental variables of a unified behavior theory. (p.15, cited by Hake, 1982)

The generality in an uncontrolled setting will thus show the important variables of its target behaviour. An appropriate research method for ABA should be able to reveal both the functional relationships between a behaviour and its controlling variable and the generality across organisms, settings and the target behaviour. The concept of "generality" may indicate which research methods can be used for consumer

researchers who subscribe to a behaviourist theoretical perspective. Although radical behaviourism is ultimately interested in the investigation of an individual organism's behaviour and its environment, there may be times when group behaviour may reflect individual behavioural responses, especially in social settings. Johnston and Pennypacker (1993) point out an arbitrarily defined collection of individuals who do not interact among themselves in the usual definition of a group yet respond similarly in the same setting at least once, such as consumer purchase behaviour in a store. Therefore, it is prudent for this study to investigate impulse buying behaviour among a group of human subjects.

Nord and Peter (1980), who are regarded as consumer researchers working from a behaviourist perspective, also state that researchers would have less experimental control over consumers in real-world shopping settings than they do over subjects in other human operant studies carried out in hospitals or organizations. They also argue, however, that the theoretical concept of radical behaviourism can provide marketing research with a valuable explanation by investigating the external factors, experiences and consequences of consumer behaviour (Nord & Peter, 1980). To generate the discussion above, this thesis thus proposes to use the questionnaire method to investigate consumer impulse buying behaviour within the BPM framework. Using such a research method does not mean that this study has abandoned the view of radical behaviourism; rather, it can be seen as a method that combines consumer research with ABA.

In summary, when behavioural theory meets consumer research, the main contribution is the explanation of behavioural progress, rather than the application of the traditional experimental research method. Skinner also views radical behaviourism as a "philosophy of science" (Chiesa, 1992). For consumer researchers, it serves the purpose of providing the fundamental concept of behavioural analysis and provides a theoretical framework (Foxall, 1987). This thesis therefore argues that an alternative method, which is suitable for consumer research and closer to the philosophy of science of radical behaviourism, is needed. To this end, this thesis can be seen as

consumer research closely linked to ABA; it applies the principles and theory of radical behaviourism to its study of consumer impulse buying behaviour.

To conclude, this study chooses to use a questionnaire survey to investigate impulse buying and its controlling variables, because this method can easily investigate the target behaviour among populations. It should be able to achieve the goal of proving the functional relationship between a behaviour and its variable as well as the generality of this relationship across human species.

3-1-5 Using a self-reporting questionnaire as the research method

One might argue that a self-reporting questionnaire does not seem to fit the methodology of radical behaviourism, for the measurement seems to be relatively more subjective than objective (Johnston & Pennypacker, 1993). This is because self-report questionnaires normally require individual reflection or experience from the respondents, and in the view of strict behaviourists, these experiences are from the “black box”, which cannot be observed in public (Polkinghorne, 2005). Some behaviourists therefore rule out individual experience, attitudes or beliefs because they deny the reliability and validity of these variables.

However, due to the nature of human subjects, laboratory research on the subject matter could still lead to an argument of reliability. Scholars argue that when it comes to social behavioural analysis, laboratory experiments are not always completely reliable, because of the “residual effect” (previous lived experiences with reinforcers) of the human subjects (Wanchisen & Tatham, 1991). Skinner (1957) also admits that for a behaviour in a social setting, namely a verbal community, it is necessary to extend the laboratory-based principles of selection with consequences to account for what people actually say. Skinner (1957) argues that verbal behaviour (e.g. how people describe their experience) is still a behaviour under the effect of contingency. Verbal behaviour, such as a response to a questionnaire that reveals certain attitudes or beliefs, is also influenced by the same setting and historical factors that shape non-verbal behaviour, such as store choice (Foxall, 1997; Leek et al, 2000).

The self-reporting questionnaire can thus be seen as a research method of this type. Wolf (1978) argues that the use of subjective measures does not mean that the focus of the research shifts to internal cause variables. Instead, it is an attempt to assess the dimensions of complex reinforcers in socially acceptable and practical ways. In fact, the questionnaire has become a common method for investigating impulsivity, such as delay discounting within a behavioural framework (Navarick, 2004). Navarick (2004) points out that the use of human subjects making choices in the questionnaire does not mean that the questionnaire itself influences those responses through operant conditioning. It is simply an efficient way of conducting the research and its result is easy to interpret within a behavioural framework. Another study also demonstrates that there is a positive correlation between the data from human operant laboratory research and the data from a self-reporting test (Wulfert et al, 1994). This result suggests not only that the self-rating scale of a questionnaire can have predictive validity, but that a questionnaire can also serve as a beginning point for a complete human operant research programme by identifying the target behaviour, its variables and the target population.

In this study, the questionnaire is seen as an efficient way to screen the generality of the occurrence of impulse buying behaviour and its variables, which may also show the variability – it is simply a way of referring to the prediction inherent in interpretations that address future uses of experimental research (Johnston & Pennypacker, 1993). In summary, this study argues that it is appropriate to use a questionnaire survey to study impulse buying behaviour from the perspective of behaviourism. The results of the questionnaire aim to reveal the functional relationships between impulse buying behaviour and its variables, instead of testing these with a hypothesis. Furthermore, the results of this study could serve as a starting point for impulse buying research from the perspective of behaviourism by screening out the generality of impulse buying behaviour and its variables; this may also be helpful in further developing a behavioural research programme for impulse buying behaviour in both closed and open settings.

3-2 Research Design

The previous section illustrated the rationale and the legitimacy of the present author's proposal to use a questionnaire as the research method for this study. Although methods of measurement such as rating scales are fundamentally different approaches to behaviourism, it is possible that sometimes the target behaviour cannot be directly measured (Johnston & Pennypacker, 1993). Impulse buying behaviour is a good example of this, as this behaviour can happen online or at the shopping mall. It is impossible to observe this behaviour directly all at once.

Researchers also acknowledge that the subject matter may be directly observable or made through some types of representation, such as questionnaire response (Sommer & Sommer, 1980). Therefore, the research method of the main study is determined as a questionnaire survey, with a pre-study interview involving a small sample. The rest of the research techniques and the whole research design are discussed in the following sections.

Research designs are invented to answer research questions as validly, objectively, accurately and economically as possible (Kerlinger, 1964). Therefore, a good research design should be developed as a framework that is not only mostly suitable for the researcher's resources but also adequate for the investigation of variables in order to answer the research questions. Research designs can outline procedures for every research activity and provide key answers, such as which method should be applied to find the answers to the research question and which techniques should be used to gather data (Blumberg et al, 2005).

This research aims to explain consumer impulse buying behaviour from the view of radical behaviourism by applying the BPM. Radical behaviourism provides us with the theoretical background that behaviour is located within the interaction between an organism and its environment. Meanwhile, these variables that affect behavioural response have been represented and outlined by the BPM, such as variables of the consumer behavioural setting or individual learning history. The research questions in

this study should therefore be whether the relationships between these variables and impulse buying behaviour can be determined as lawful. Impulse buying behaviour has been seen as the dependent variable in this study, while other variables of the BPM serve as independent variables. As previously discussed, although research on radical behaviourism is data-driven, the BPM plays the role of a theoretical framework, and the data collected from this research will be used to support the study propositions derived from the BPM. Therefore, this study can be seen as deductive research, which starts with a well-established theory that guides and predicts observation (Ray, 1997).

The research design should also lead to the way to collect the data for this study. Both primary data and secondary data were collected. The secondary data in this study refer to the material derived from academic literature reviews and to general facts and figures obtained from the media or other databases. A thorough review of the literature is an essential part of planning research, for it can be used to generate or to structure research ideas (Barrett, 2006). In other words, a proper literature review should be able to identify research problems and other knowledge gaps. The step of the literature review can also be useful in comparing the methodology and results of other studies on similar topics (Johnston & Pennypacker, 1993). For instance, the previous literature on impulse buying discussed in Chapter 2 allows this research to identify the possible variables of impulse buying behaviour, which can be generated with the structure of the BPM.

During the progress of the literature review, various methods used by previous impulse buying studies were also found and explored, which was helpful for this research design. Both quantitative and qualitative methods were used to investigate impulse buying in the previous literature. Qualitative methods, such as interviews, are used to gain insights into consumers' internal states or motivation while they are impulse buying (see: Barley & Nancarrow, 1998; Dittmar & Drury, 2000). On the other hand, quantitative methods are often used to test specific variables or hypotheses that are proposed to influence impulse buying behaviour (e.g. Rook & Fisher, 1995; Park & Lennon, 2006; Silvera et al, 2008). Sommer and Sommer (1980) state that it is

impossible to find an ideal research technique, since each method has its advantages and disadvantages; a mixed-method approach thus usually proves helpful. Therefore, this study was designed to collect primary data by using both qualitative (small-sample interview) and quantitative methods (questionnaire survey).

The main study was designed as a questionnaire method. Therefore, quantitative data and methods are expected in this study. The quantitative paradigm is traditionally classified as positivistic (Deshpande, 1983; Howe & Eisenhart, 1990; Michell, 2003) and the concept of this paradigm shares some commonality with behaviourism. Since it is derived from the positivistic view of natural sciences, the quantitative methodology ought to hold the similar assumption that human events are lawful (Deshpande, 1983). Radical behaviourism uses the rate of behaviour response as the fundamental datum in order to determine the relationship between a behavioural response and its reinforcers. Meanwhile, this study aims to reveal the lawful relationships between impulse buying behaviour and the variables derived from the BPM. Therefore, quantitative methods should be helpful in exploring the rate of impulse buying behaviour in various situations in this study. Notably, quantitative methods are usually developed for the task of verifying or confirming a theory (Reichardt & Cook, 1979). Since this study takes the position of radical behaviourism, the data provided by quantitative methods in this study should allow us to see the truth of this phenomenon and to determine the functional relations between impulse buying behaviour and the BPM. In other words, the main objective for the data of this study should be descriptive rather than predictive; it should reveal the functional relationships of variables rather than verify hypotheses.

This research chooses a questionnaire survey as its research method for the main study. A large-sample survey such as a questionnaire is regarded as the preferred method for quantitative research (Bryman, 1984). The definition of a survey is “a method of gathering information about characteristics, actions, or opinions of a large group of people, referred to as a population” (Tanur, 1982). Researchers suggest that there are three conditions of a study in which the sample survey can be useful and appropriate: 1) when quantitative data are needed for the research, 2) when the information sought is

specific and familiar to the respondents and 3) when the researcher has prior knowledge of particular problems and the ranges of responses likely to emerge (Warwick & Lininger, 1975).

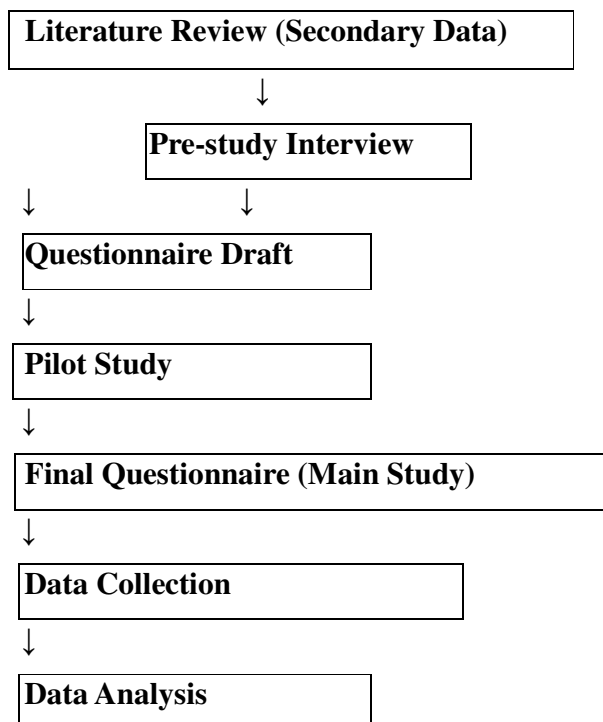
Corresponding to this statement, the research philosophy of this thesis shows that quantitative data should be suitable for the study, as discussed in the previous section. Meanwhile, the main theme of this thesis – impulse buying behaviour – is a familiar concept for the normal population, as nine out of ten consumers occasionally buy on impulse (Welles, 1986). Furthermore, the previous impulse buying literature and the BPM provide some solid study propositions for the situations in which impulse buying is likely to occur. Therefore, the survey method, such as a self-administered questionnaire, should be an appropriate tool for collecting primary data for this thesis.

Moreover, in order to avoid the debate between quantitative and qualitative methods, this thesis also includes a qualitative research method – a small sample interview – as a pre-study within the research design. As previous scholars suggest, multi-method research often has an advantage over single-method research (Sommer & Sommer, 1980). Therefore, this study can also be considered as research that follows a sequential procedure; that is, it begins with a qualitative method for exploratory purposes and continues with a quantitative method with a larger sample to generate the findings (Creswell, 2009). The data collection for this study started with a small-sample interview. Since the sample size of this pre-study is small, the data obtained in this pre-study are not meant to be representative of the whole population or to test the study propositions. Researchers suggest that a small-sample survey could serve as a pilot study, which may give some useful indications for the future research (Sturgis, 2006). Similarly, the aim of this pre-study is to contribute to the design of the questionnaire by establishing a further understanding of impulse buying language and impulse buying situations.

To conclude, the research design of this thesis is illustrated by the figure below. The literature review, explained in the previous chapter, provides the main secondary data

for this study, including previous findings and explanations of impulse buying behaviour and the BPM. These secondary data helped the present author to shape the research questions and define the contributions of this study by revealing gaps in the literature. Furthermore, secondary data, such as news or national databases, are used in this thesis to describe impulse buying phenomena or the consumer population. On the other hand, the primary data were collected in two ways. Firstly, a small-sample interview was conducted in order to support the suitability of the BPM framework for impulse buying behaviour. The data obtained in this interview were particularly useful for the design of the main study. Finally, the main primary data for this thesis were collected using a questionnaire. The details of the research approach are explained in the next section.

Figure 5: The Research Approach



3-2-1 The pre-study interview

The rationale behind the pre-study interview

The interview is a popular method of qualitative research, which aims to understand respondents' experiences through data given in the respondents' own words (Polkinghorne, 2005). In the field of social research, although there has long been a debate between quantitative and qualitative researchers (Bryman, 1984), more and more researchers recognize that it may be beneficial for social research to adopt a mixed method (see: Deshpande, 1983; Johnson & Onwuegbuzie, 2004). Perhaps the most common mixed method is to begin with a pilot qualitative study and finish by applying a quantitative method (Morgan, 1998). Sieber (1973) argues that it is possible for qualitative works to contribute to a survey method. For instance, a preliminary personal interview or observation of a limited sample of the subject population can provide more insights into the survey design (Sieber, 1973).

A preliminary interview is helpful in this study for two reasons: 1) it will support the research question by exploring whether the consumers' impulse buying experience described in their own words can be explained by the BPM; and 2) it will provide materials for questionnaire design including actual impulse buying scenarios reported by consumers, as an interview is able to obtain a large amount of information that can be adaptable to individual situations (Kerlinger, 1964).

More specifically, individual situations or experiences may contribute to the questionnaire design. This technique is also used in other social research, and it is proven that the instrument that is revised in order to match the respondents' language more closely is more successful in later studies (Blumberg et al, 2005). In summary, a preliminary interview should be able to help the present author to understand impulse buying language and situations in the "real world", which could further contribute to the questionnaire design. Furthermore, it is justifiable to use interviewing as the pre-study research method, as the data obtained come from respondents' verbal behaviour, which was discussed in the previous research design section.

The selection of the participants

Breakwell (2006) argues that there are no absolute rules that determine an appropriate selection of interviewees and/or sample size, as long as the samples could serve their purpose for the study. A semi-interview method with twelve samples was conducted as the pre-study. Although the sample size is relatively small, this pre-study is not looking for a generalized or representative result; rather, it aims to contribute to the questionnaire design by gathering common language and scenarios of impulse buying reported by the participants. Therefore, achieving a sample size large enough to be representative of the general population is not the objective of this pre-study. Since the main study is designed as a cross-cultural study with both British and Taiwanese samples, the twelve samples in the pre-study included five British and seven Taiwanese participants. The ratio of male and female participants was 1:1.

The sampling method in the pre-study can be seen as convenience sampling. The participants were chosen from among the researcher's acquaintances and from a range of different age ranges or occupations, including students, young professionals, middle-aged professionals and housewives. As Sieber (1973) suggests, a qualitative pre-study would be helpful if different customer segments are investigated. Qualitative researchers also argue that since the focus of qualitative research is on describing and understanding human experience, researchers should begin with the various data of experience in order to formulate a valid description (Polkinghorne, 2005). Since this study aims to investigate impulse buying behaviour among general consumers, the pre-study interview targeted consumers of various ages and occupations, rather than simply using student samples. The demographics of the samples included students, young professionals, housewives, construction workers and business men, aged from 18 to over 50. The bias caused by convenience sampling selection should be limited, as all the participants have an equal chance of being exposed to impulse buying situations in their daily life.

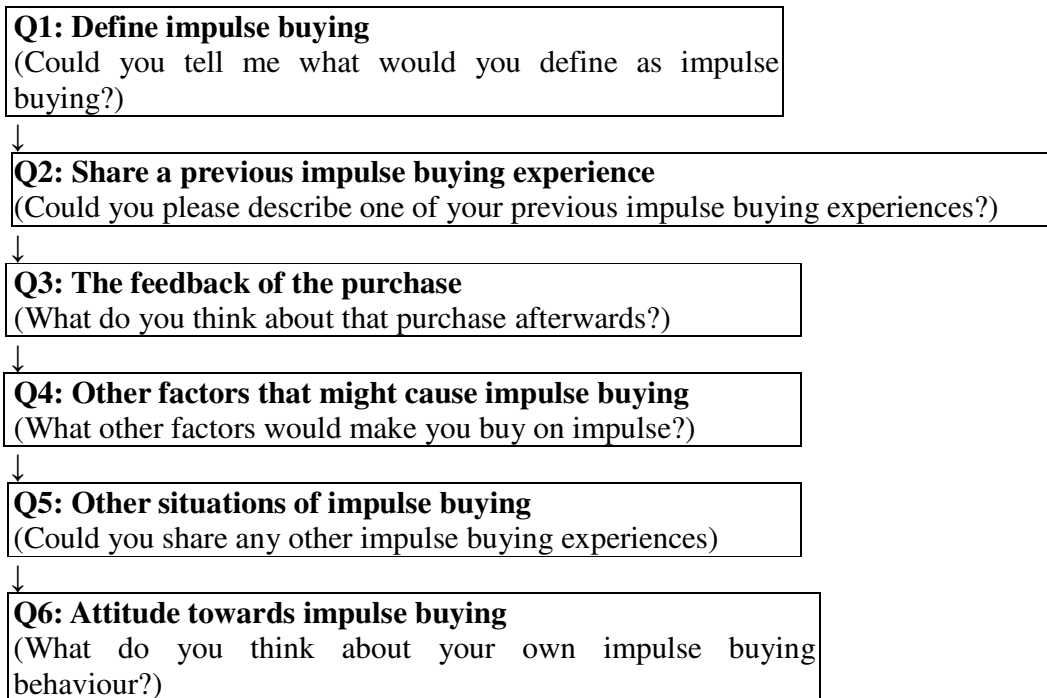
The pre-study was conducted in July and August 2009. Due to the location and limited resources of the author, three interviews with Taiwanese participants were conducted as

phone interviews; the rest of the interviews were all face-to-face interviews. Types of non-verbal communication (such as nodding, facial expression) are not included in the data of the pre-study, since it is the verbal presentation of the respondents that may contribute to the questionnaire design. Therefore, phone interviews appeared to be appropriate for use in the pre-study, and were also considered as a cost-efficient alternative to face-to-face interviews (Ray, 1997). Both English and Chinese languages were spoken in the pre-study, as this present researcher is bilingual. For Taiwanese samples, the language used in the interview was Chinese, so that the respondents could express themselves more freely. Each interview was sound-recorded with the permission of the respondents.

The structure of the interview

This interview was designed as a semi-structured interview. The theme of the interview was based on impulse buying and the BPM. It started with a short introduction by the researcher explaining the topic (impulse buying behaviour) and the purpose (for academic use only) of the interview. The structure of the interview can be illustrated by the figure shown below. The main questions in the figure are worded and standardized so that equivalence of stimuli is created for every participant (Oppenheim, 2005). This means that every participant is expected to answer the same questions (Fowler, 1995). There are several open-ended questions in the interview, as open-ended questions can help to avoid the bias (Easterby-Smith et al, 2002). Moreover, open-ended questions are more likely to result in additional information from the participants (Ray, 1997). According to Kerlinger (1964), the funnel means that the interview starts with a broad question (e.g. to share the impulse buying situation) and narrows down progressively to important points (e.g. external factors that form the situation).

Figure 6: The Structure of the Pre-study Interview



The interview began by asking the participants to define impulse buying in their own words, in order to confirm that the participants were familiar with the concept and definition of impulse buying. The participants were then asked to describe a previous impulse buying experience. This question helped the researcher to locate the specific situation within the BPM and identify other external factors of the behaviour. Next, the respondents were asked to evaluate their purchase from that specific experience, so that the utilitarian/informational reinforcement could be identified by the researcher. Questions 4 and 5 provided additional information concerning the situations/factors in which consumers might also buy on impulse. Finally, the participants were asked if they held positive or negative attitudes towards impulse buying. This question was not only helpful for revealing the post-purchase evaluation of the consumer, but also for gaining a further insight into the individual consumer's learning history of impulse buying behaviour. Although surveys of attitudes are normally rejected from traditional behavioural research, Foxall (1997) proposes that consumers' statements of attitude can provide useful guides to their consumption histories and the context in which their

behaviours produce relevant reinforcing and punishing consequences (cited in Leek et al, 2000).

Coding and analysis of the interview

After the pre-study, the audio files of the interviews were transcribed into texts for further analysis. The analysis method is a form of content analysis in which the interview texts are coded based on the components of the BPM. Content analysis can be defined as “a systematic technique for analyzing message content and message handling – it is a tool for observing and analyzing the overt communication behaviour of selected communicators” (Budd et al, 1967) or simply as “a method of analyzing written, verbal or visual communication messages” (Cole, 1988). Researchers also agree that the characteristics of the content analysis method are systematic, objective and quantitative when the analysis is performed based on previous knowledge and theory (Kassarjian, 1977). Therefore, the purpose of the content analysis in this pre-study is to test the degree to which the BPM can be applied to the study of impulse buying and to provide reliable materials for further questionnaire designs.

Coding is an important step of interview data analysis, as it is the process by which lengthy answers are reduced and sorted into specific response categories (Sommer & Sommer, 1980). The coding progress starts with establishing a code list based on the BPM. The table shown below lists the codes identified in this pre-study based on elements of the BPM. There are four types of factors that form the consumer behavioural setting: physical (SP), temporal (ST), social (SS) and regulatory (SR). Another key antecedent variable of the BPM is the learning history (LH). The variables of consequences include utilitarian reinforcement (UR), utilitarian punishment (UP), informational reinforcement (IR) and informational punishment (IP). The state variable (SV) is also mentioned in the BPM, as it represents the consumer’s state of mind, such as mood or emotion (Foxall, 1993). The BPM matrix provides eight different purchase situations by contingency category, including status consumption (CC1), fulfilment (CC2), popular entertainment (CC3), inescapable entertainment (CC4), saving and collecting (CC5), token-based consumption (CC6), routine purchasing (CC7) and

mandatory consumption (CC8).

Table 5: Codes based on the BPM

Consumer Behavioural Setting Physical	SP	Status Consumption	CC1
Consumer Behavioural Setting Temporal	ST	Fulfilment	CC2
Consumer Behavioural Setting Social	SS	Popular Entertainment	CC3
Consumer Behavioural Setting Regulatory	SR	Inescapable Entertainment	CC4
Learning History	LH	Saving and Collecting	CC5
Utilitarian Reinforcement	UR	Token-Based Consumption	CC6
Utilitarian Punishment	UP	Routine Purchasing	CC7
Informational Reinforcement	IR	Mandatory Consumption	CC8
Informational Punishment	IP	State Variable	SV

Interpreting the data

The pre-study is designed to test whether impulse buying behaviour can be explained by the BPM and to explore the evidence of the BPM components based on consumers' description, as well as to provide useful and evident material for the later questionnaire design. The data are interpreted by counting the frequency with which the codes shown above occur, so that they can later be compared with the findings of the previous impulse buying literature and used to develop questions for the survey. The table shown below connects the factors of impulse buying with their corresponding codes that will later be used for questionnaire design based on the frequency with which they occur. For example, the temporal factor of the consumer behavioural setting that was brought up most often is "on sale". Therefore, it is put into the questionnaire draft. Two situations of the BPM matrix were not mentioned in the pre-study interviews. Therefore, when it comes to the questionnaire design of the BPM matrix, previous studies of the BPM are taken into consideration to design possible situations for impulse buying behaviour.

Table 6: List of Codes and Represented Items

Consumer Behavioural Setting Physical (SP)	The favourite shop/item The shop window display The shop location/decoration The crowd buying in the shop
Consumer Behavioural Setting Temporal (ST)	On sale/money available Occasion
Consumer Behavioural Setting Social (SS)	Shopping with others Service of sales personnel
Consumer Behavioural Setting Regulatory (SR)	The queue for the checkout
Learning History (LH)	Brand name/personality Bad experiences Impulse buying is immature I always think before I buy
Utilitarian Reinforcement (UR)	Bargain/I like it/good quality Useful for a long time Give it a try/cheer up by buying
Utilitarian Punishment (UP)	Waste money/not useful
Informational Reinforcement (IR)	Show it to friends/others Show my taste/exclusive Positive feedback from others Others like it
Informational Punishment (IP)	Impulse buying is immature
State Variable (SV)	In a bad mood/in a hurry In a mood of not caring
Status Consumption (CC1)	Luxury brand shopping
Fulfilment (CC2)	VIP membership selling
Popular Entertainment (CC3)	Shopping trip with others
Inescapable Entertainment (CC4)	Have to accompany others
Saving and Collecting (CC5)	Using a voucher
Token-Based Consumption (CC6)	N/A
Routine Purchasing (CC7)	Food shopping in supermarket
Mandatory Consumption (CC8)	N/A

Conclusion of the pre-study

An interview was used for the pre-study. Although the sample size in the pre-study is small, the objective of the pre-study was not to generalize a result from the population, but to explore actual impulse buying situations and experiences through consumers' own language. In other words, the goal of this pre-study was to contribute to later questionnaire design rather than obtaining representative data themselves. The data from the pre-study reveal various situations in which consumers reported impulse

buying behaviour. From all eight situations derived from the BPM matrix, only two were not reported by consumers. This result suggests that if a questionnaire describes the consumption situations of the BPM matrix, it would be fairly easy for future respondents to understand the scenarios and to relate themselves to the situations. On the other hand, the participants in this study also reported factors related to the consumer behavioural setting and learning history in the BPM. Therefore, the later questionnaire can benefit from how consumers described impulse buying situations and how other variables in the BPM were described in consumers' own language. In summary, the pre-study provides not only useful materials for questionnaire design but also the promising expectation that such a questionnaire will be successfully understood by future respondents.

3-3 The Main Study

The main study in the present research uses a questionnaire designed based on the theoretical framework of the BPM. Sir Francis Galton, who is believed to be one of the first researchers to use the questionnaire method, proposes that a questionnaire has its value as an instrument for studying behaviour that could not be observed or experimented on directly (cited by Sommer & Sommer, 1980). Questionnaires are very commonly used in the impulse buying literature. The reason could be that questionnaires are one of the most efficient research methods for obtaining descriptive or explanatory data from a large sample (Mark et al, 1997). Although the previous literature provides valuable perspectives on impulse buying, the present study still wishes to make a contribution for the following reasons: instead of merely investigating whether certain variables are related to impulse buying, this study uses a questionnaire that can examine impulse buying behaviour from its antecedents to its consequences. It may contribute a more complete perspective to the study of impulse buying.

Many impulse buying studies use impulse buying scales from the previous literature to measure consumers' impulse buying intention. However, we can expect human overt behaviour to vary under different circumstances. Therefore, in this study, not only is an

impulse buying scale used, but also eight shopping scenarios are created based on the BPM matrix, in order to measure consumers' impulse buying choice in a certain specific consumption situation. In other words, this study can not only investigate impulse buying behaviour in a variety of consumption situations but also examine the *actual impulsive choice of consumers*, rather than their tendency. Finally, there is a lack of international data in the impulse buying literature (Kacen & Lee, 2002; Lee & Kacen, 2008). Most impulse buying studies are conducted in a specific geographic area. The samples in this study are thus from two different cultural backgrounds: the United Kingdom and Taiwan. The questionnaire design and samples for the study are introduced in the next section.

3-3-1 Questionnaire design: General design

The content of the questionnaire can be divided into four parts: 1) impulse buying situation, 2) individual personality rating scales, 3) consumer behavioural setting variables and 4) questions related to the respondents' backgrounds. The content as a whole thus includes newly developed questions and self-rating scales from the previous academic literature. Researchers suggest that if questions are newly developed, casual observations or interviews should be conducted beforehand to determine whether the developed questions are appropriate (Sommer & Sommer, 1980). A pre-study interview was conducted for this purpose, as discussed in the previous section.

Therefore, it can be expected that general respondents should be able to understand the meaning and the wording of the newly developed questions. Scholars propose that a questionnaire survey is a way of communication, especially in market research, and it is important to use the language that respondents can relate to (Brace, 2004, cited by Lietz, 2010). This questionnaire design also follows other guidelines proposed by researchers, such as avoiding complex grammar so that the questions are easy to read (Brislin, 1986) and using questions that are as short as possible (Lietz, 2010). The measurement scales, including the BEM, UPPS and impulse buying tendency, are all borrowed from the previous academic literature and were introduced in Chapter 2.

Further details of the ways in which the questionnaire is developed are discussed below.

The questionnaire begins with a short introduction, informing the respondents of the purpose of the survey and assuring them that the data will only be used for academic purposes. A simple definition of impulse buying is then given: “unplanned, and it is when you suddenly feel the urge to buy something immediately” (Rook, 1987). This may help the respondents to have a better and unified understanding of impulse buying so that they can answer the following questions accordingly. The main body of the questionnaire is based on the BPM, the evidence provided by the previous literature and the pre-study interview data. The design of the questions is explained by each variable of the BPM.

Consumer behavioural setting

The section on the consumer behavioural setting is designed to ask consumers to rank the factors that are important to them regarding their impulse buying behaviour. Each factor is rated by the respondents using a Likert scale (1 = completely unimportant, 5 = extremely important). The items are mainly derived from the previous impulse buying literature (e.g. Beatty & Ferrall, 1998; Youn & Faber, 2000; Luo, 2005) and the pre-study interview. For example, as introduced in Chapter 2, Youn and Faber (2000) identify the most frequently endorsed cues for consumers’ impulse buying, such as the sales season and special occasions. Finally, 20 items for the consumer behavioural setting are identified. In order to reduce confusion among the respondents, the description of the items uses one simple sentence instead of a word. For example, “shop location” is rephrased as “If the shop location is convenient to me”. The initial non-purified scales for the 20 consumer behavioural setting items are summarized in the following table.

Table 7: Non-purified Scales of the Behavioural Setting Items

Physical	Store location; browsing a store that I like; window display; store atmosphere and decor; bargain; low price; famous or popular store
Social	Going out with friends; going out with family; buying for others
Temporal	Money available; promotion; spare time; special occasions; just received money; sales season
Regulatory	The queue at the checkout is long

Learning history

UPPS

Since impulse buying behaviour is a behaviour that results from impulsivity, the UPPS impulsivity scale (Whiteside & Lynam, 2001) is used in this study as an individual's learning history. As discussed in Chapter 2, the reasons why UPPS is used in this study are that the UPPS impulsive behaviour scale has been widely used to examine various forms of impulse behaviour, such as drinking (Magid & Colder, 2007) and cigarette craving (Billieux et al, 2007). Furthermore, the UPPS scale examines the different facets of impulsivity, which may be more promising for investigating the different types of impulse buying behaviour. The UPPS consists of 45 items, which measure 4 facets of impulsivity, including urgency (e.g. I have trouble controlling my impulses), lack of premeditation (e.g. I usually make up my mind through careful reasoning), lack of perseverance (e.g. I finish what I start) and sensation seeking (e.g. I would enjoy parachute jumping). Each facet has items for the respondents to rank from "not true at all" = 1 to "very true" = 4. However, due to the length of the questionnaire, the UPPS scale items were changed to a shorter form in order to achieve a higher response rate in the final study. The short form of the UPPS is also commonly seen in the literature: Keye et al (2009) successfully shape the UPPS scales into 20 items, and Glenn and Klonsky (2010) conduct their research with 16 items from the UPPS. This thesis adopts the 20 items of UPPS validated by Keye et al (2009), with 5 items for each facet.

Impulse buying tendency

The IB tendency scale chosen for this study is developed and validated by Rook and Fisher (1995). The reasons for choosing this scale are that it is one of the IB tendency

scales that has been used most in previous studies (e.g. Kacen & Lee, 2002; Jones et al, 2003; Peck & Childers, 2006; Zhang et al, 2007) and that it has also been applied to Taiwanese samples (Lin & Lin, 2005). Moreover, the items of this scale were originally developed through the impulsivity literature, and they represent consumers' attitude towards and previous experience of impulse buying, thus fitting with the learning history variable argued in this thesis. Moreover, this scale is able to represent consumers' past *experiences* of impulse buying (Coley & Burgess, 2003), which is one of the main themes of the individual learning history of the BPM. Hence, the difference between this thesis and other previous studies is that the IB tendency is not used as the individual impulsiveness trait but as an indicator of individuals' past experience of and attitude towards impulse buying behaviour. Rook and Fisher (1995) developed 9 items for the impulse buying tendency, measured on 5-point strongly agree to strongly disagree scales. The items include "I often buy things spontaneously" and reverse-order item such as "I carefully plan most of my purchases".

Masculinity and femininity: The BSRI

As this study aims to contribute to the understanding of impulse buying behaviour at both the individual and the group level, it includes the individual cultural background (nationality) and the level of masculinity and femininity. Therefore, it uses the BEM Sex Role Inventory as one of the individual variables. The BEM Sex Role Inventory (BSRI) has been widely used to test individuals' masculinity and femininity levels (Holt & Ellis, 1998). Originally, the BSRI had 60 items, which conceptualize masculinity and femininity as two independent dimensions. Numerous studies employ shorter forms of the BSRI and apply them to cross-cultural samples (e.g. Zhang, 2001). This study thus adopts the 30 items of BSRI Short Form revised by Bem (1981). Researchers also argue that this version is widely used in consumer research (Palan, 2001; Schertzer et al, 2008). Due to the need to reduce the length of the questionnaire, the neutral items were not included in this study, in total 10 items for masculinity and 10 items for femininity. The respondents need to rate themselves for the personality description, such as "dominant" or "gentle", on a Likert scale from 1 = never or almost never true to 7 = always or almost always true.

Nationality

This study aims to investigate impulse buying choice using both British and Taiwanese samples. The reason why these two sample groups are targeted is not only because of the accessibility of the researcher but also that the analytical framework of cultural differences is based on Hofstede's cultural dimensions (Hofstede, 1980; Hofstede, 1984). The UK is rated as a more individualist country, while Taiwan is more a collectivist society (Spector et al, 2001). The questionnaire requires the respondents to report their nationality. As this study targets British and Taiwanese consumers, respondents who reported other nationalities are excluded from further data analysis.

The BPM matrix and consequences

Differently from other impulse buying research, this study not only measures impulse buying behaviour with other variables, but also attempts to investigate the actual impulse buying choice in various consumption situations. Therefore, eight scenarios based on the BPM matrix were given to the respondents in the questionnaire. After the description of the scenarios, the respondents were asked "Would you buy on impulse now?" so that they could tick "yes" or "no" to respond. Several studies also design purchase situations based on the BPM (e.g. Greenley & Foxall, 1999; Newman & Foxall, 2003; Foxall & Yani-De-Soriano, 2005). Thus, the scenario design is based on previous studies and the pre-study interview. For instance, CC4, CC5 and CC8 were not mentioned during the interviews. Hence, these situations were created on the basis of the BPM matrix assumption that the level of closed/open setting and utilitarian/informational reinforcement would vary in each situation.

Table 8: The BPM Matrix and the Scenario Design

	Greenley and Foxall (1999)	The Present Study
CC1	Luxury shopping	Luxury shopping in Harrods
CC2	Gambling in a casino	High-end dining in a restaurant
CC3	Watching TV	Day out shopping with family/friends
CC4	In-flight entertainment	Having to accompany someone to the shops
CC5	Saving	Finding an item that can complete the collection
CC6	Frequent-flier scheme	Credit card point scheme
CC7	Grocery shopping	Routine shopping at a supermarket
CC8	Paying taxes	Last call of the bar

Reinforcement of impulse buying

After the respondents have answered whether they would buy on impulse in that scenario, they are asked to provide the reason why as the measurement of the anticipated consequences of their impulse buying. The BPM matrix already has its original prediction of the level of reinforcement in each situation. For instance, CC1 and CC2 have higher levels of utilitarian and informational reinforcement, whilst CC7 and CC8 have relatively low levels of utilitarian and informational reinforcement (Foxall, 1992; Foxall, 1997). The rationales for this study testing the reinforcement include: 1) reinforcement of impulse buying has not yet been examined in the existing literature; and 2) retesting the levels of reinforcement in each situation of the BPM could help this study to meet the rigorous standard of research by confirming the role of reinforcement in impulse buying behaviour in each situation.

Fifteen possible reinforcements of impulse buying were identified based on the previous literature and pre-study interview (Rook, 1987; Hausman, 2000; Youn & Faber, 2000). The categories of these items are utilitarian reinforcement (e.g. product attribute), informational reinforcement (e.g. social reason) and state variables (e.g.

mood). The first draft of the questionnaire only allowed the respondents to choose one reason above all. However, this part was improved with a multiple-choice section in the final stage of the questionnaire, in order to obtain more efficient statistical data. The utilitarian reinforcements consist of *item on sale, useful, I like it, what I have been looking for, good bargain* and *might need it in the future* (total 6 items). The informational reinforcements comprise *positive feedback from others, people around me are buying, to make me happy, to feel exclusive, fits my taste* and *to fit into my social group* (total 6 items). The state variables are made up of *happy so don't care, to cheer myself up* and *in a hurry* (total 3 items).

Other individual variables

Basic information about the respondents is also required in this study, including age and biological sex. Furthermore, in order to gain a better understanding of individuals' impulse buying behaviour, several relevant questions are asked in this questionnaire, including impulse buying frequency ("How often do you buy on impulse?"), their regret of impulse buying ("Do you regret your impulse buying?") and their spending pattern of impulse buying ("How much would you pay for your impulse buying?" and "How much did you spend on your last impulse buy?"). In summary, these questions serve as a complement to the further understanding of consumer self-reported impulse buying experiences, rather than a measurement of consumers' actual impulse buying behaviour.

The length of the questionnaire and the order of questionnaire items

The content of this questionnaire is eight pages long. Although it has been assumed that long questionnaires have negative effects on the response rate and data quality, several studies reject this concept and find that the data quality is not influenced by the length of the questionnaire (Burchell & Marsh, 1992; Lund & Gram, 1998; Iglesias & Torgerson, 2000; Subar et al, 2001). Roscoe et al (1975) also state that the length of the questionnaire has no effect on the response rate. Herzog and Bachman (1981) also suggest that a long questionnaire can have satisfactory data quality if the motivation of the respondents to participate in the study can be maintained, for instance if the

questions asked are interesting and personally related or the respondents are asked if they are willing to participate in this study. The procedure of this study may therefore complement this point, as the researcher approached the respondents and asked whether they would be willing to fill in a questionnaire regarding their own shopping behaviour.

Herzog and Bachman (1981) also suggest that an appropriate question order design may avoid a long questionnaire affecting the response rate and bias. This study also takes this suggestion into consideration. Researchers argue that the item order might influence a biased response, and therefore a questionnaire should not only avoid having emotional/sensitive questions at the beginning, but should also ask the demographic questions at the end (Rattray & Jones, 2007). Therefore, the questions regarding the individual background are placed at the end of the questionnaire. Shopping situations, which require more cognitive efforts from respondents, are put at the beginning of the questionnaire.

The translation of the questionnaire

The samples in this study are drawn from both British and Taiwanese populations. Therefore, translation from English to Chinese of this questionnaire is necessary. Direct translation is the most commonly used method to translate an instrument in the field of social research (Green & White, 1976). In the meantime, direct translation could be problematic if no team-based assessment follows (Harkness, 2003). Thus, the questionnaire was translated by the current author, and then the back-translation method was applied by a master student who is majoring in Chinese–English translation and is familiar with the Taiwanese common language and culture. This method was used because the back-translation method is highly recommended by cross-cultural researchers (Birslin, 1970; Chapman & Carter, 1979). The translation procedure found that there is no significant difference in the choice of words for most of the scales. Finally, a bilingual researcher reviewed and validated the final result of the translation, so that the translation could be satisfactory and appropriate for the research.

3-3-2 Sample design

This study agrees with the previous assertion that “most consumers at least occasionally buy on impulse”. Therefore, the target population consists of normal consumers who have their own will of spending. Moreover, although several impulse buying studies use student samples, researchers argue that student samples should not represent normal consumers, as they have certain shared characteristics, such as a stronger need for peer approval (Wells, 1993). Therefore, the sample population of this study is designed to exclude teenagers and focus on adults, as the evidence shows that consumers who are over the age of 20 start to maintain constant spending on themselves (Lührmann, 2007).

Cross-cultural sample and sample size

Studies concerning the cross-cultural comparison of consumer behaviour are still surprisingly needed in some subjects of marketing (Parameswaran & Yaprak, 1987). There is a lack of cross-cultural samples in both the impulse buying and the BPM studies. Therefore, this study aims to fill this knowledge gap by studying both British and Taiwanese consumers. Kacen and Lee (2002; Lee & Kacen, 2008) contribute to this issue. Differently from their studies, this thesis views cultural background as an independent variable of impulse buying behaviour, but also aims to provide an insight into this behaviour with the evidence of cross-cultural comparison. The UK has long been well known for its mature and developed consumption society, but little is known about Taiwan. According to some survey companies, such as suggested by Nielson, Taiwan has “entered the age of modern retail”, and so the Taiwanese consumer behaviour is worth exploring. Once the targeted population has been chosen, the sample size needs to be determined before distributing the questionnaire. The sample size is calculated with a formula that is commonly used in social marketing research (Bell & Bryman, 2003; Burns & Bush, 2004), which is:

$$n = N / (1 + N \times e^2)$$

n = sample size, N = population size, e = margin of error

According to the Taiwan National Statistics Bureau, people who are over 18 years old make up 80.54% of the total population in Taiwan (23,193,638), which would be 18,680,156. The same logic applies. The adult population in the UK is 49,132,200. Therefore, the sample size in this study should be close to 400, when the margin of error is set to 5%. This study achieved a total sample size of 414, including 201 British and 213 Taiwanese respondents, with various age categories from above 18 to over 50. Moreover, not only does the sample size calculation show that about 400 samples would be representative of these two populations, Comfrey and Lee (1992) also suggest that a sample size of 300–500 would be the standard of good–very good. Therefore, a final sample size of 414 should be appropriate for this study.

3-3-3 The pilot test

For the questionnaire, the reliability evaluation is closely linked to construct validation, and is usually examined by Cronbach's alpha, which represents the homogeneity of the items (Hammond, 2006). Cronbach's alpha was developed to show the internal consistency or average correlation of items (Cronbach, 1951). Researchers suggest that coefficients with sufficient reliability should be greater than 0.7 (Hammond, 2006). For this questionnaire, most of the items are borrowed from the previous literature with validated reliability, except for the consumer behavioural setting scales. The original Cronbach's alpha coefficients of the items from the previous studies are shown below.

UPPS

This study adopts 20 items of the UPPS scale (Keye et al, 2009). The internal consistencies of the short-form UPPS are: premeditation = 0.75; urgency = 0.74; sensation seeking = 0.72; and perseverance = 0.75.

IB tendency

The IB tendency scale developed by Rook and Fisher (1995) also achieves satisfactory reliability, with alphas ranging from 0.79 to 0.92.

BSRI

Arrindell et al (2005) report high internal consistency of the short-form BSRI with cross-cultural samples. Coefficient alphas for masculinity and femininity reveal high reliability (masculinity alpha = .79–.87; femininity alpha = .82–.90).

A pilot test was conducted to establish further the reliability and validity of the questionnaire. A total of 60 questionnaires were distributed to a convenience sample and 54 were accurately completed. To purify the scales in this questionnaire further, inter-item correlations and item-to-total correlations were used. Items with low Pearson item–total correlations were removed in order to achieve a satisfactory Cronbach’s alpha. Among all the scales used, only the behavioural setting scale was developed for this study. Hence, the pilot test served to refine the scale. Finally, the items of the consumer behavioural setting were also reduced to 10 items with a satisfactory range from 0.702 to 0.769. For the regulatory factor, as only one item was listed, no further test was required. After the pilot test, the UPPS scale was refined to 19 items with a Cronbach’s alpha range from 0.72 to 0.78.

Table 9: The Purified Scale

Factor	Number of items	Cronbach’s alpha
Physical	3	.769
Social	2	.730
Temporal	4	.702
UPPS	19	.72–.78
IB tendency	9	.79–.92 from previous study
BSRI	20	.79–.90 from previous study

3-3-4 Questionnaire distribution

Because of the cross-cultural samples, the present author used two methods to distribute the questionnaire. Regarding the Taiwanese sample, questionnaires in Microsoft Word file form were distributed via email and social websites such as Facebook and PTT (the most popular social site in Taiwan). Therefore, the data collection method of the Taiwanese sample could be seen as an email survey but not an online survey. Convenience samples were used to collect the Taiwanese data. Most of

the Taiwanese respondents were found using the “snowball” method through social and family connections. As for the British samples, the respondents were randomly chosen on the train or in a coffee shop, where the respondents could have enough time to fill in the questionnaire. In total, 430 questionnaires were distributed, while some samples were not included due to not being British/Taiwanese or having too much missing data. Finally, 414 samples were usable for this study, giving a final response rate of about 96%. It is assumed that face-to-face questionnaire distribution and the use of a convenience sample contributed to the high response rate.

There are a few concerns regarding the data collection procedure of this study. Firstly, this study adopted different modes of data collection for the British and the Taiwanese samples. Researchers suggest that employing more than one method for collecting survey data is acceptable and usually leads to a higher response rate (Cobanoglu et al, 2001). Since this study was conducted within a limited time frame and aimed for a relatively large sample size, a mixed mode of collecting survey data was beneficial for this research.

Secondly, this study also used convenience samples, although most respondents were random strangers to the researcher (e.g. British passengers on the train and Taiwanese snowball sampling). The main criticism of the use of convenience sampling is that it is difficult to represent a general population, although it is the most cost- and time-efficient collecting method (Blumberg et al, 2005). Consumer researchers also argue that a convenience sample, especially a student sample, is not suitable for consumer research, as the respondent might not necessarily be the purchaser of the product (Feber, 1977, cited by Lynch Jr., 1982). As this study requires the efficiency brought by convenience sampling, efforts were made to minimize the issues. For instance, this study attempted to maintain the equality and diversity of the samples. In order to generalize the samples among the general population as much as possible, the respondents across different age and occupational groups were all approached by the researcher to participate in this study, rather than merely collecting samples from students. The questionnaire collection was also documented and categorized by age

groups to ensure the generality of the sample. Moreover, a convenience sample is usable in this study because it is fair to make the assumption that every consumer has an equal opportunity to engage in an impulse buying choice. Previous research has already established that most consumers at least occasionally buy on impulse (Welles, 1986). Therefore, the respondents in this convenience sample should be as familiar with impulse buying situations as any other member of the general population.

Conclusion

This chapter introduced the methodology of this study. Although experiments have been the preferred method of behaviourists, it is impractical and immature to conduct an impulse buying behaviour experiment in a real-world setting at this stage. This study thus proposes to use a questionnaire as the research tool, as the concepts of quantitative data and verbal behaviour (self-reporting) are also widely accepted by behaviourists. The procedures of this study include a pre-study interview and a main study questionnaire. The pre-study interview contributes to a better understanding of consumers' language, and may thus benefit the questionnaire design. The questionnaire used in the main study is designed based on the components of the BPM and the previous literature. A pilot test was conducted to purify the scales and establish the reliability and validity of this questionnaire. The main study also overcomes the limitations of the pre-study by using a quantitative method and a much larger sample size: 414 valid questionnaires were collected and are ready to be analysed in this study. Furthermore, the cross-cultural sample may also contribute to the existing impulse buying literature, and should be beneficial for both researchers and marketers.

Chapter 4: Data Analysis

Introduction

This study proposes a behavioural view to investigate impulse buying. The research objectives include the examination of how the situation influences impulse buying behaviour and the identification of different impulse buying patterns. The previous chapter has discussed the methodology of radical behaviourism and the method that this study could use. As a self-report questionnaire can be seen as the examination of individuals' verbal behaviour, this study adopts the questionnaire survey as the method for data collection. After a pre-study that contributed to a better questionnaire design and a pilot study that was used to purify the questionnaire contents, the final questionnaire designed according to the BPM was distributed to British and Taiwanese consumers. Finally, a convenience sample of 414 respondents was obtained and is ready to be analysed in this study. This chapter documents the data analysis for this study, which includes a discussion following each study proposition's testing.

The subject matter in this study is impulse buying behaviour. In other words, the dependent variable in this study is the impulse buying choice reported by the respondents. The data for this variable come from the respondents' reports of their likely impulse buying behaviour in each situation of the BPM matrix (named CCIB in the following). After answering "yes" or "no" to each likely impulse buying situation, the respondents were given a total score for their impulse buying behaviour (yes = 1; no = 0; total score ranging from 0 to 8). The dependent variables are repeatedly tested with other independent variables in the following section to examine the relationships between impulse buying behaviour and other variables of the BPM. Moreover, since the respondents indicated "yes" or "no" for the impulse buying choice in each situation, this study can identify impulse buyers (respondents who indicated "yes") and non-impulse buyers (respondents who indicated "no") in each situation. The table below shows the key terms for analysis in this chapter, such as CCIB and the scenario of each BPM matrix.

Table 10: Terms for Analysis

Key Terms in the Analysis	Definition
CCIB (Dependent Variable)	Total scores of consumer impulse buying choice
IBT	Total scores of impulse buying tendency
Situation CC1	Luxury shopping in Harrods
Situation CC2	High-end dining in a restaurant
Situation CC3	Day out shopping with family/friends
Situation CC4	Having to accompany someone to shops
Situation CC5	Finding an item that can complete a collection
Situation CC6	Credit card point scheme
Situation CC7	Routine shopping at a supermarket
Situation CC8	Last call of the bar

The structure of this chapter is also based on the study propositions. The statistical methods, the analysis and the discussion will be presented in the section that relates to each study proposition. The rationales of using the statistical methods will be introduced in each section, and a short discussion will be provided at the end of each proposition analysis in this chapter, following by the general discussion provided in the next chapter.

4-1 Data Overview

A total sample of 414 respondents, consisting of 183 men and 231 women, was identified after screening out the unsuitable samples. As the table and the graph below show, the total sample size of 414 includes 201 British and 213 Taiwanese respondents with various age categories from over 18 to over 50. The first procedure of the data analysis was to confirm that such data fit a normal distribution curve. Histograms were used to detect a normal distribution curve (Howitt & Cramer, 2008), and the data were confirmed as having normal distribution. No further factor analysis was carried out in this study for the following reasons; firstly, the previous literature provides sufficient evidence of factor analysis, especially regarding UPPS (Whiteside & Lynam, 2001; Magid & Colder, 2007; Schmidt et al, 2008), the BSRI (Gaudreau, 1977; Blanchard-Fields et al, 1994; Campbell et al, 1997) and impulse buying tendency (Youn & Faber, 2000). Secondly, although the reinforcement and consumer behavioural setting variables were originally designed in this study, the number of variables is already very small (fewer than five). Howitt and Cramer (2008) point out

that it makes little sense to conduct factor analysis if one has five or fewer variables.

Graph 1: Age Distribution of the Sample

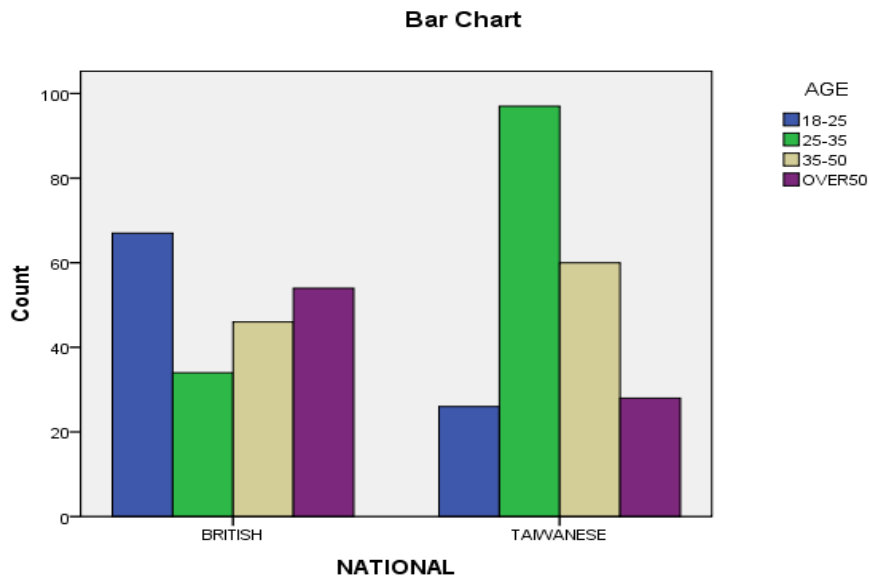


Table 11: Sample Distribution in this Study

			NATIONAL		Total
			BRITISH	TAIWANESE	
SEX	MALE	Count	95	88	183
		% within SEX	51.9%	48.1%	100.0%
		% within NATIONAL	47.3%	41.3%	44.2%
		% of Total	22.9%	21.3%	44.2%
	FEMALE	Count	106	125	231
		% within SEX	45.9%	54.1%	100.0%
		% within NATIONAL	52.7%	58.7%	55.8%
		% of Total	25.6%	30.2%	55.8%
Total	Count		201	213	414
	% within SEX		48.6%	51.4%	100.0%
	% within NATIONAL		100.0%	100.0%	100.0%
	% of Total		48.6%	51.4%	100.0%

4-2 Study Proposition Testing

4-2-1 Study Proposition 1: Consumer behavioural setting elements significantly influence the consumer impulse buying choice.

Procedure

The first proposition in this study argues that the consumer behaviour setting, including physical, temporal, social and regulatory factors, has a significant influence on the impulse buying choice. A Pearson correlation test was used, as it can provide a measure of the strength of a relationship between two variables (Brace et al, 2000). The first step of this analysis was to detect the relationship between an individual's total score for the behavioural setting and the individual's total score for CCIB. Next, the Pearson correlation test was also used to test the relationships between CCIB and each behavioural setting variable, including the physical, social, temporal and regulatory factors. The same procedure was also used to test further if the behavioural setting is more correlated with the consumer impulse buying choice in open or closed settings. Finally, an independent t-test was used to compare the behavioural setting score between impulse buyers and non-impulse buyers in each consumer situation (8CC in the BPM matrix). The independent t-test should be used when performance needs to be compared between two independent groups and the data meet the assumption for a parametric test (Brace et al, 2000). In this case, an independent t-test can compare the behavioural setting score between impulse buyers and non-impulse buyers in each situation, so that we may determine whether the behavioural setting variables influence an individual's impulse buying choice in each situation.

Analysis

Firstly, the correlation between each individual total score for behavioural setting and CCIB was tested by the Pearson correlation test. As the table below shows, the Pearson coefficient indicates that there is a positive relationship between CCIB and behavioural setting ($r = 0.172$; $p < 0.01$).

		SET TOTAL	CCIB TOTAL
SET TOTAL	Pearson Correlation	1	.172**
	Sig. (2-Tailed)		.000
	N	414	414
CCIB TOTAL	Pearson Correlation	.172**	1
	Sig. (2-Tailed)	.000	
	N	414	414

Secondly, the relationships between CCIB and each factor for the behavioural setting were examined in more detail. The Pearson correlation test showed that CCIB is strongly related to physical factors ($r = .261$; $p < 0.01$), but it is not significantly related to other factors in the behavioural setting ($p > 0.05$).

Pearson Correlation Coefficient for Four Factors of the Behavioural Setting

		CCIB TOTAL	Temporal	Social	Physical	Regulatory
CCIB TOTAL	Pearson Correlation	1	.068	.081	.261**	.062
	Sig. (2-Tailed)		.168	.100	.000	.214
	N	414	414	414	414	408

A Pearson correlation test further detected whether the behavioural setting is more related to the consumer impulse buying choice in open or closed settings. The test showed that the behavioural setting is more significantly related to the consumer impulse buying choice in closed settings ($r = 0.169$; $p < 0.01$) than in open settings ($p > 0.05$).

Pearson Correlation Coefficient for Open/Closed Settings

		OPEN CCIB	CLOSED CCIB	SET TOTAL
SET TOTAL	Pearson Correlation	.096	.169**	1
	Sig. (2-Tailed)	.051	.001	
	N	414	414	414

Finally, an independent t-test was used to investigate the relationship between the consumer impulse buying choice in each situation and the behavioural setting. Situation CC1 examines consumer impulse buying behaviour in an open setting of luxury consumption (a luxury brand in a department store). No major difference was found between impulse buyers and non-impulse buyers in this situation regarding the behavioural setting total scores, temporal factors, social factors and regulatory factor, as the two-tailed p-values are all larger than 0.05 in these tests. However, there is a significant difference between these two groups regarding physical factors ($t = -2.573$; $df = 87.734$; two-tailed $p = 0.012$). The impulse buyers in situation CC1 have a higher mean ($M = 10.0000$; $SD = 2.38048$) than non-impulse buyers ($M = 9.1360$; $SD = 2.64869$).

Physical Factor Scores of Impulse Buyers and Non-impulse Buyers

Situation CC1	Luxury Shopping	N	Mean	Std Deviation	Std Error Mean
PHY TOTAL	.00	353	9.1360	2.64869	.14098
	1.00	61	10.0000	2.38048	.30479

Situation CC2 represents a closed setting of status consumption (dining in a high-end restaurant). The independent t-test reveals that there is a significant difference between impulse buyers and non-impulse buyers in situation CC2 on the behavioural setting total scores ($t = -4.231$; $df = 372.561$; two-tailed $p < 0.01$). The impulse buyers in situation CC2 have a higher mean ($M = 32.5519$; $SD = 5.68341$) than non-impulse buyers ($M = 29.8842$; $SD = 6.975518$). In fact, the impulse buyers in situation CC2 were also found to have higher scores on temporal factors, social factors and physical factors. Hence, the t-test shows the significant differences in these three behavioural setting variables (two-tailed $p < 0.05$). Only the regulatory factor was not found to have such a difference (two-tailed $p > 0.05$).

The CC3 situation described an open, popular entertainment situation for consumers (a day shopping trip with friends/family). Again, no significant relation was found between the consumer impulse buying choice and the total behavioural setting scores

(two-tailed $p > 0.05$). Among all the behavioural setting variables, only the total score of physical factors was found to be related to the consumer choice in the CC3 situation. The respondents who reported that they would buy on impulse in this situation tended to have a higher score on the physical factor ($M = 9.4745$; $SD = 2.52166$) than the respondents who stated that they would not ($M = 8.6000$; $SD = 2.84268$). Hence, in this situation, impulse buyers have significantly higher scores than non-impulse buyers ($t = -2.927$; $df = 412$; two-tailed $p = 0.004$).

Physical Factor Scores of Impulse Buyers and Non-impulse Buyers

Situation CC3		N	Mean	Std Deviation	Std Error Mean
Day Out Shopping					
PHY TOTAL	.00	100	8.6000	2.84268	.28427
	1.00	314	9.4745	2.52166	.14231

The CC4 situation represents a closed setting for consumers as inescapable entertainment (having to accompany someone to the mall). The independent t-test shows that there is a significant difference between impulse buyers and non-impulse buyers in the behavioural setting total scores ($t = -5.230$; $df = 394.423$; two-tailed $p < 0.01$). As the table below indicates, impulse buyers in the CC4 situation have a higher mean of behavioural setting total scores ($M = 32.4541$; $SD = 6.14496$) than non-impulse buyers ($M = 29.1179$; $SD = 6.75121$).

Behaviour Setting Scores of Impulse Buyers and Non-impulse Buyers

Situation CC4		N	Mean	Std Deviation	Std Error Mean
Inescapable Shopping Trip					
SET TOTAL	.00	195	29.1179	6.75121	.48346
	1.00	218	32.4541	6.14496	.41619

Furthermore, the independent t-test revealed that there are significant differences between these two groups in all the other behavioural setting variables, including temporal factors ($t = -2.239$; $df = 400.979$; two-tailed $p = 0.026$), social factors ($t = -4.445$; $df = 400.390$; two-tailed $p < 0.01$), physical factors ($t = -4.425$; $df = 411$;

two-tailed $p < 0.01$) and the regulatory factor ($t = -2.863$; $df = 405$; two-tailed $p = 0.004$). As before, impulse buyers in the CC4 situation tended to score higher than non-impulse buyers for all four behavioural setting variables.

Situation CC5 illustrates an open setting involving collection behaviour (collecting stamps or coins, etc.). The independent t-test shows that there is no significant difference between impulse buyers and non-impulse buyers in this situation concerning the behavioural setting total scores (two-tailed $p > 0.05$). The further analysis shows no significant difference between these two groups for all four behavioural setting variables (two-tailed $p > 0.05$).

Situation CC6 in this study represents a closed setting of saving or accumulating behaviour (credit point exchange). No significant difference was found between the two groups in the behavioural setting total scores and all four behavioural setting variables (two-tailed $p > 0.05$).

For CC7 (routine shopping in a supermarket), the result shows that there is no major difference between impulse buyers and non-impulse buyers regarding their total scores of the behavioural setting (two-tailed $p > 0.05$). A further t-test analysis reveals that none of the behavioural setting variables are related to the impulse buying choice in the CC7 situation (two-tailed $p > 0.05$).

The CC8 situation in this study illustrates a closed setting that is bounded by rules or regulatory, which corresponds to the mandatory shopping in the BPM matrix (last call of the bar). The independent t-test shows that the consumer choice in this situation is strongly related to the consumer behavioural setting ($t = 2.777$; $df = 412$; two-tailed $p = 0.006$). The respondents who reported that they would not buy on impulse in this situation have a higher mean ($M = 31.5898$; $SD = 6.29408$) than the respondents who reported that they would buy on impulse ($M = 29.7405$; $SD = 7.02605$).

Behaviour Setting Scores of Impulse Buyers and Non-impulse Buyers

Situation 8	Bar Last Call	N	Mean	Std Deviation	Std Error Mean
SET TOTAL	.00	256	31.5898	6.29408	.39338
	1.00	158	29.7405	7.02605	.55896

Further analysis also shows that the total score of temporal factors in the behavioural setting is closely related to the consumer choice in the CC8 situation ($t = 2.482$; $df = 412$; two-tailed $p = 0.013$). Non-impulse buyers have a higher mean of 7.1289 ($SD = 2.09832$), whilst impulse buyers in this situation have a mean of 6.6203 ($SD = 1.90075$). The same as the total score of social factors, non-impulse buyers ($M = 12.0195$; $SD = 2.75745$) scored higher than impulse buyers in this situation ($M = 11.0443$; $SD = 2.94178$). The difference between these two groups is proved significant by the t-test ($t = 3.355$; $df = 316.193$; two-tailed $p = 0.001$). On the other hand, the total scores of the physical factors and the regulatory factor were not related to the consumer choice in the CC8 situation (two-tailed $p > 0.05$).

Discussion

Overall, the first study proposition is supported by the results: the consumer behavioural setting does influence impulse buying behaviour. Consumer CCIB has been found to be significantly related to the consumer behavioural setting, especially in the closed settings. This corresponds to previous studies of impulse buying (Beatty & Ferrell, 1998; Youn & Faber, 2000; Hausman, 2000) and the BPM's prediction that closed settings have greater control over consumer behaviour (Foxall, 1990; Foxall, 1992). Among the four behavioural setting factors in the BPM, physical factors have been found to have the strongest relations with impulse buying behaviour. Thus, physical factors such as *store decor and atmosphere*, *window display* and *a store that an individual likes* would be more promising in terms of prompting consumer impulse buying behaviour. Physical factors were also found to be related to impulse buying behaviour in four consumption situations of the BPM matrix. Specifically, physical factors were found to have the strongest effect on impulse buying behaviour in the *open* setting situations of *luxury shopping* and *day shopping trip with friends/family* in

comparison with the other setting variables.

In the closed-setting situations, physical factors were found to be effective for impulse buying in the scenarios of *high-end dining* and *inescapable entertainment*. As for other factors, such as temporal, social and regulatory factors, none of them were singled out in the analysis of consumption situations. However, in the situations of a *closed* setting regarding *high-end dining* and *inescapable entertainment*, all these three factors were found to be related to impulse buying choice, along with physical factors. This could indicate that in these two closed-setting situations, all the behavioural setting factors have greater effects on impulse buying behaviour, including *temporal* (e.g. item on sale), *social* (e.g. peer influence) and *regulatory* (e.g. the queue for the checkout).

In summary, the results confirm the role of the consumer behavioural setting in the BPM and Study Proposition 1, which predicts that the behavioural setting would have an effect on consumer behaviour: in this study, impulse buying behaviour. The results also suggest that physical factors are more commonly related to impulse buying behaviour than other factors in the behavioural setting. Moreover, the strength of the effects of the behavioural setting on an individual's impulse buying choice varies in different situations.

4-2-2 Study Proposition 2: Impulse buying tendency as learning history is positively correlated with the consumer impulse buying choice.

Procedure

The second proposition in this study examines the relationship between individual phenotype learning history and impulse buying behaviour. It is predicted in this study that the individual impulse buying tendency (IBT) is positively related to the individual's impulse buying choice. As in the analysis in the previous analysis, the Pearson correlation test was first used to examine the relationship between the IBT and the CCIB. Similar to the previous section, the relationships between the IBT and the consumer impulse buying choice in open and closed settings were also further

examined by the Pearson correlation test. Finally, the independent t-test was used to compare the IBT scores between impulse buyers and non-impulse buyers in each consumer situation, so that we could see whether the impulse buying choice in each situation is significantly related to the IBT.

Analysis

The first step in addressing this study proposition is to determine whether there is a positive relationship between the IBT and the CCIB. A Pearson correlation was used to detect such a relationship. The test shows that there is a positive relationship between IBT and CCIB ($r = 0.414$; $p < 0.01$).

Impulse Buying Tendency and Consumer Impulse Buying Choice

	CCIB TOTAL	IB TOTAL
CCIB TOTAL Pearson Correlation	1	.414**
Sig. (2-Tailed)		.000
N	414	414

A further test was performed to detect the relationships between the IBT and the consumer impulse buying choice in open and closed settings. The Pearson correlation test shows that the IBT is significantly related to the consumer impulse buying choice in both open ($r = 0.371$; $p < 0.000$) and closed settings ($r = 0.271$; $p < 0.000$).

Finally, the IBT was also examined within the eight situations represented by the BPM matrix. The independent t-test was used to compare the means of the impulse respondents and the non-impulse respondents. The table below summarizes the result of this analysis. As the table shows, the IBT differs significantly between the impulse buyers and the non-impulse buyers in most of the situations, except for situation CC2 and situation CC6 (both two-tailed $p > 0.05$). Furthermore, the impulse buyers in each situation in which the significant differences were found have an expectedly higher IBT than the non-impulse buyers.

Table 12: Results of the Independent t-Test on the IBT and Impulse Buying Choice

Situation	T value	Df value	Two-tailed p
CC1 Luxury shopping	t = -4.127	412	p < 0.01
CC2 High-end dining	t = -1.213	411	p > 0.05
CC3 Day shopping trip	t = -7.241	197.517	p < 0.01
CC4 Inescapable trip to the mall	t = -4.506	411	p < 0.01
CC5 Private collection	t = -4.025	411.212	p < 0.01
CC6 Credit card reward points	t = -1.177	412	p > 0.05
CC7 Routine shopping in a supermarket	t = -3.594	412	p < 0.001
CC8 Last call of the bar	t = -4.160	285.765	p < 0.01

Discussion

Overall, the results support Study Proposition 2, which predicts that the impulse buying tendency is positively related to the consumer impulse buying choice. This is consistent with the previous impulse buying studies in that the impulse buying tendency is a strong predictor of consumer impulse buying behaviour (Rook & Fisher, 1995; Jones et al, 2003). This finding also corresponds to the behavioural view of impulse buying, which is that a consumer's past experience may maintain such a behaviour, and this may form a continued behavioural pattern. Consumers who regularly buy on impulse (people who have a higher IBT) continued to do so in this study (achieving higher CCIB scores).

However, previous impulse buying research often assumes that the impulse buying tendency will lead to impulse buying behaviour across different situations (Beatty & Ferrell, 1998; Jones et al, 2003). In this study, the results show that there are two situations in which the impulse buying choice is not related to an individual's impulse buying tendency. These situations include *accumulation behaviour in the closed setting* (credit card reward points) and *accomplishment behaviour in the closed setting* (high-end dining). Since the impulse buying tendency cannot differentiate between impulse buyers and non-impulse buyers in these two situations, this implies that other factors influence the consumer impulse choice in these situations. For instance, the impulse buying choice in the high-end dining situation was found to be closely related to the consumer behavioural setting. This could suggest that for accomplishment

behaviour in a closed setting, such as high-end dining or gambling in a casino (Foxall & Greenley, 1999), the atmospherics of the setting exert greater control over the individual's impulse buying choice than the individual impulse buying tendency.

4-2-3 Study Proposition 3: Impulsivity as learning history is significantly related to the consumer impulse buying choice.

SP3-1: Urgency is positively correlated with the consumer impulse buying choice.

SP3-2: Premeditation is negatively correlated with the consumer impulse buying choice.

SP3-3: Perseverance is negatively correlated with the consumer impulse buying choice.

SP3-4 Sensation seeking is positively correlated with the consumer impulse buying choice.

Procedure

As in the previous analysis, this study proposition was addressed through a series of Pearson correlation tests to detect the relationships between CCIB and each facet of UPPS as well as the relationships between UPPS and consumer impulse buying choice in open and closed settings. The independent t-tests were then used to examine how each facet of UPPS related to the impulse buying choice in the different consumer situations. Additionally, another Pearson correlation test was used to reveal the relationship between UPPS and impulse buying tendency to gain a deeper insight into the individual learning history variables.

Analysis

First of all, the relationships between the CCIB and the UPPS scales were also examined by a Pearson correlation test. The results show that only two facets of the UPPS scales were positively related to the CCIB total scores, including urgency ($r = .225$; $p < 0.01$) and sensation seeking ($r = .218$; $p < 0.01$). These results support the study propositions SP3-1 and SP3-4. No significant relationship was found regarding the premeditation and perseverance facets in UPPS ($p > 0.05$), which means that SP3-2

and SP3-3 are not supported by the results.

The Pearson Correlation Coefficients of UPPS and CCIB

		PRE TOTAL	U TOTAL	SEN TOTAL	PER TOTAL	CCIB TOTAL
CCIB TOTAL	Pearson Correlation	-.062	.225**	.218**	-.026	1
	Sig. (2-Tailed)	.206	.000	.000	.592	
	N	414	414	414	414	414

The Pearson correlation test further examined the relationships between UPPS and consumer impulse buying choice in open and closed settings. The results correspond to the previous findings that only urgency and sensation seeking have significant relationships with the consumer impulse buying choice in both open and closed settings ($p < 0.01$).

Pearson Correlation Test for UPPS and Open/Closed Settings

		PRE TOTAL	U TOTAL	SEN TOTAL	PER TOTAL
OPEN CCIB	Pearson Correlation	-.095	.167**	.159**	-.015
	Sig. (2-Tailed)	.054	.001	.001	.768
	N	414	414	414	414
CLOSED CCIB	Pearson Correlation	-.005	.182**	.177**	-.025
	Sig. (2-Tailed)	.919	.000	.000	.607
	N	414	414	414	414

Furthermore, the independent t-test analysis was used to examine the role of each facet of UPPS in each consumption situation. In situation CC1, which represents luxury shopping in an open setting, only one facet was found to have a significant difference between the two groups of respondents. The total score for urgency was found to differ significantly between the impulse respondents and the non-impulse ones ($t = -3.640$; $df = 412$; two-tailed $p < 0.01$). The impulse respondents were found to score higher on the urgency scale ($M = 11.8197$; $SD = 2.96933$) than the non-impulse respondents ($M = 10.4278$; $SD = 2.72009$). As for situation CC2, only premeditation was found to be significantly different between the two groups of respondents ($t = -2.338$; $df = 411$;

two-tailed $p < 0.05$). Unexpectedly, the impulse respondents have a higher mean of premeditation ($M = 15.0584$; $SD = 2.23822$) than the non-impulse respondents ($M = 14.4826$; $SD = 2.52174$).

In situation CC3, impulse buyers and non-impulse buyers were found to have significant differences in their premeditation scores ($t = 2.263$; $df = 412$; two-tailed $p = 0.024$). Non-impulse respondents were found to have higher premeditation scores ($M = 15.1800$; $SD = 2.38844$) than impulse respondents ($M = 14.5510$; $SD = 2.43095$). A significant difference between the two groups was also found regarding the urgency facet ($t = -2.868$; $df = 412$; two-tailed $p = 0.04$). The impulse respondents have a higher mean ($M = 10.8535$; $SD = 2.80874$) than the non-impulse respondents ($M = 9.9400$; $SD = 2.66219$). As regards the sensation-seeking and perseverance facets, no major difference was found between these two groups in situation CC3.

Situation CC4 describes the situation of inescapable entertainment. In this situation, only urgency was found to differ significantly between the impulse respondents and the non-impulse respondents ($t = -3.055$; $df = 411$; two-tailed $p = 0.002$). The impulse respondents scored higher ($M = 11.0183$; $SD = 2.70682$) than the non-impulse respondents ($M = 10.1846$; $SD = 2.83694$). None of the other UPPS facets was found to be significantly different between these two groups ($p > 0.05$).

In situation CC5, personal collection consumption, the independent t-test only detected one major difference between the impulse respondents and the non-impulse ones. Only sensation seeking was found to differ significantly between these two groups ($t = -3.409$; $df = 412$; two-tailed $p = 0.001$), while the impulse respondents reached a higher mean ($M = 11.9318$; $SD = 3.73064$) than the non-impulse respondents ($M = 10.6443$; $SD = 3.94946$). No other facets of UPPS were found to be significantly different between these two groups ($p > 0.05$). On the other hand, the independent t-test shows that there is no significant difference between the impulse respondents and the non-impulse respondents on any of the UPPS facets in situation CC6 ($p > 0.05$).

In situation CC7, routine shopping in a supermarket, no major difference was found between impulse buyers and non-impulse buyers regarding all four facets of UPPS. In situation CC8, there is a significant difference in the premeditation scores between the impulse respondents and the non-impulse respondents ($t = 2.599$; $df = 412$; two-tailed $p = 0.10$). As expected, non-impulse respondents have a higher mean of premeditation ($M = 14.9453$; $SD = 2.40199$) than impulse respondents ($M = 14.3101$; $SD = 2.43881$). Moreover, impulse respondents were found to have higher means of urgency ($M = 11.1392$; $SD = 3.05255$) and sensation seeking ($M = 12.9747$; $SD = 3.88358$) than non-impulse respondents. The different scores of these two facets were found to be significant between these two groups (urgency: $t = -2.807$; $df = 291.687$; two-tailed $p = 0.005$; sensation seeking: $t = -7.178$; $df = 412$; two-tailed $p < 0.01$). No such difference was found in the perseverance scores between these two groups in situation CC8 ($p > 0.05$). A summary of the findings in this section is shown in the table below.

Table 13: Significant UPPS Facets in the BPM Matrix

Situation	Significant UPPS facet
CC1 Luxury shopping	Urgency
CC2 High-end dining	Premeditation (IB buyers have higher scores)
CC3 Day shopping trip	Premeditation, urgency
CC4 Inescapable trip to the mall	Urgency
CC5 Private collection	Sensation seeking
CC6 Credit card reward points	None
CC7 Routine shopping in a supermarket	None
CC8 Last call of the bar	Premeditation, sensation seeking

Furthermore, a Pearson correlation test was used to examine whether there are relations between the impulse buying tendency and each facet of UPPS. As expected, the IB tendency is negatively related to the premeditation scale ($r = -.315$; $p < 0.01$) and perseverance ($r = -.262$; $p < 0.01$). The IB tendency was also found to be positively related to the urgency scale ($r = .525$; $p < 0.01$). However, there is no significant relation between the IB tendency and the sensation-seeking scale ($p > 0.05$).

Pearson Correlation Coefficient of UPPS and IB Tendency

		PRE TOTAL	U TOTAL	SEN TOTAL	PER TOTAL	IB TOTAL
IB TOTAL	Pearson Correlation	-.315**	.525**	.089	-.262**	1
	Sig. (2-Tailed)	.000	.000	.070	.000	
	N	414	414	414	414	414

Discussion

This study proposes that impulsivity measured by UPPS serves as the individual learning history of impulse buying behaviour. Overall, this study proposition is supported by the results. Moreover, the results show that which facet of UPPS is related to the consumer impulse buying choice depends on the situation. This important point can be illustrated by several findings in this section. Firstly, although premeditation and perseverance were found not to be related to the individual CCIB total scores, premeditation was found to be related to impulse buying behaviour in three situations, while perseverance was found to be related to the impulse buying tendency. This implies that the ways in which each facet of UPPS leads to impulse buying could be *domain-specific*. This corresponds to the previous discussion in Chapter 2, that various routes to impulse buying behaviour can be illustrated by different personality traits reacting to different environmental cues (Youn & Faber, 2000). In other words, the UPPS facet that is the strongest indicator of impulse buying behaviour depends on *situations*.

For instance, sensation seeking was found to be positively related to the consumer impulse buying choice. This is to be expected, as previous scholars describe impulse buying behaviour as an exciting experience for consumers (Rook, 1987; Kacen & Lee, 2000; Verplanken & Herabadi, 2002; Sharma et al, 2008). Surprisingly, sensation seeking was not found to be related to the impulse buying tendency, while it was discovered to be related to the impulse buying choice later in several situations in the BPM matrix. This could suggest that impulse buying is not always a novelty-seeking experience for consumers; however, impulse buying could be a thrilling experience in

certain *situations*. For instance, the results show that impulse buying behaviour in the situations of “completing a private collection” (situation CC5) and “last call of the bar” (situation CC8) are related to an individual’s sensation-seeking scores. In fact, the analysis reveals that each facet of UPPS has a distinguishable role in different consumption situations. In situations CC7 and CC6, no UPPS facet was found to differ significantly between the impulse respondents and the non-impulse respondents. This suggests that UPPS as individual learning history has the smallest effect on impulse buying behaviour in these two situations.

Among the four facets of UPPS, *urgency* has the strongest relationship with impulse buying behaviour. Urgency has been described as the tendency to act quickly without planning, especially in the face of a negative effect (D’Anestis et al, 2007), and it has been found to be the facet of UPPS that is most related to problematic behaviours such as cigarette craving and compulsive buying (Billieux et al, 2007; Billieux et al, 2008a). This reveals the nature of urgency, such as “I have trouble controlling my impulse” and “I do things on impulse that I later regret”. The findings thus imply that people who have a high urgency tendency are more likely to become problematic impulse buyers. Urgency can also be found in four consumption situations. Especially in the situations of “an inescapable trip to the mall” and “luxury shopping”, urgency was the only significant facet related to impulse buying behaviour.

Premeditation was also found to be significantly related to the impulse buying choice in several situations. The consumers who reported a *lack of premeditation* are more easily prompted to engage in impulse buying behaviour, as they usually do not plan thoroughly before acting or entering a situation, and that might include their shopping behaviour. In summary, the results support the role of UPPS as individual learning history in the BPM; however, the ways in which each facet of UPPS influences impulse buying behaviour depends on the situation. Urgency was found to be the most significant facet of UPPS that was related to impulse buying behaviour, followed by premeditation and sensation seeking. Perseverance was found to be the weakest indicator of individual impulse buying behaviour in this study.

4-2-4 Study Proposition 4: There will be cultural differences in the consumer impulse buying choice. British consumers will make more impulse buying choices than Taiwanese consumers.

Procedure

To address the study proposition above, two steps of analysis were followed. First of all, an independent t-test was performed to compare the total scores of CCIB between British and Taiwanese consumers, in order to establish which group has made more impulse buying choices. The same procedure was also performed to detect whether there is any cultural differences in the consumer impulse buying choice in open and closed settings. Another analysis was the chi-square cross-tabulation test to examine whether there is a significant difference between two groups of consumers regarding the impulse buying choice in each situation. This thesis argues that chi-square cross-tabulation is useful here because this test should be used when there is only one nominal variable but there are also two different nominal variables (Howitt & Cramer, 2008). As the respondents were asked to indicate “yes” or “no” to the impulse buying choice in each situation, it is justifiable to use chi-square cross-tabulation to examine the differences in these choices between British and Taiwanese consumers.

Analysis

First of all, an independent t-test was used to ascertain which group of consumers made more impulse buying choices. The result shows that there is a significant culture difference in the CCIB total scores ($t = 3.902$; two-tailed $p < 0.01$). British consumers have a higher mean of 4.0199 ($SD = 1.29985$) than Taiwanese consumers ($M = 3.4789$; $SD = 1.50652$). Hence, this result supports the study proposition that British consumers made more impulse buying choices than Taiwanese consumers in this study. The independent t-test also reveals differences between British and Taiwanese consumers in their impulse buying choices in open and closed settings. The t-test shows that in open settings, British consumers' impulse buying choice ($M = 2.6269$; $SD = 0.77141$) is significantly higher than that of Taiwanese consumers ($M = 2.1455$; $SD = 0.98212$; $t = 5.514$, $p < 0.000$). No significant difference was found between the two groups

regarding the impulse buying choice in closed settings.

Next, the cross-tabulation chi-square was also used to examine the cultural differences in the impulse buying choice in consumer situations in the BPM matrix. The table below summarizes the results of this section. Overall, the results show the cultural differences in the impulse buying choice in each situation, which supports Study Proposition 4. British consumers were found to be the more impulsive group in situations CC1, CC3, CC5, CC7 and CC8, whilst Taiwanese consumers reported more impulse buying choices only in situations CC2 and CC4.

Table 14: Chi-Square Cross-Tabulation of Cultural Differences in the Impulse Buying Choice

Situation	Significant	<i>p</i> value	Group that made more impulse buying choices
CC1 Luxury shopping	Yes	$p < 0.05$	British
CC2 High-end dining	Yes	$p < 0.05$	Taiwanese
CC3 Day shopping trip	Yes	$p < 0.01$	British
CC4 Inescapable trip to the mall	Yes	$p < 0.01$	Taiwanese
CC5 Private collection	Yes	$p < 0.05$	British
CC6 Credit card reward points	No	$p > 0.05$	N/A
CC7 Routine shopping in a supermarket	Yes	$p < 0.01$	British
CC8 Bar last call	Yes	$p < 0.05$	British

In the CC1 situation of luxury shopping, more than half of the British respondents (62.3%) reported the impulse buying choice, while only 37.7% of Taiwanese respondents reported the same. On the contrary, in situation CC2 concerning high-end dining, the majority of the British respondents (71.6%) reported that they would not buy on impulse, while up to 46% of Taiwanese respondents reported that they would. In the CC3 situation of the day shopping trip, more Taiwanese respondents (35.7%) reported that they would not buy on impulse than British respondents (11.9%). However, in CC4, the situation of an inescapable shopping trip, higher percentages of the Taiwanese respondents (62.0%) reported impulse buying than British respondents (43.3%).

In situation CC5, although still statistically significant, the difference between Taiwanese and British consumers' impulse buying responses was not as strong as in the previous situation ($p = 0.045$). The result shows that 58.2% of British respondents would buy on impulse, while 48.4% of Taiwanese respondents made the same choice. The only situation for which no cultural difference was detected was situation CC6 ($p > 0.05$). Thus, for the accumulation behaviour situations, the cultural differences in the impulse buying choice are less significant than in other situations. For situation CC7, the main difference between the groups is that more Taiwanese respondents (8.9%) chose not to buy on impulse in this situation than British respondents (2.5%). This difference is even more significant in situation CC8, as the majority of Taiwanese respondents (83.6%) would not impulse buy in this situation, while 38.8% of British respondents made the same choice. Therefore, the results show that British consumers make more impulse buying choices in maintenance situations than Taiwanese consumers.

Discussion

The result strongly supports the study proposition that there are cultural differences in the consumer impulse buying choice. As expected, *British* consumers were found to make more impulse buying choices than Taiwanese consumers. This result corresponds to previous studies that found that consumers from individualist countries engage in more impulse buying than consumers from collectivist countries (Doran, 2002; Kacen & Lee, 2002). Moreover, the results suggest that British consumers are more likely to make impulse buying choices in their daily lives, as they make significantly more impulse buying choices in *maintenance* situations. Therefore, impulse buying behaviour is more common for the British consumption society.

Interestingly, Taiwanese consumers were found to make more impulse buying choices than British consumers in two *closed-setting* situations. As a closed setting was described as a setting in which marketers have more control in the setting over the products or service (Foxall, 1992; Foxall, 1997), it could suggest that Taiwanese consumers' impulse buying choice is under greater influences of the setting than

British consumers. Also, the impulse buying choices in these two closed settings – “inescapable shopping trip” and “high-end dining” – could possibly be related to the social factors of the behavioural setting. An individual scoring higher on social factors could mean that this individual has a higher tendency towards *social conformity*, as the individual’s behaviour would be influenced by others (Bearden & Rose, 1990). This effect was especially found in the closed settings in this study.

4-2-5 Study Proposition 5: Both utilitarian and informational reinforcements have effects on consumer impulse buying behaviour.

Procedure

As in the previous analysis, a Pearson correlation test was firstly performed to examine whether there is any relationship between the consumer impulse buying choice and two types of reinforcement: utilitarian and informational reinforcement. The aim of this section is also to find out which type of reinforcement would lead to the consumer impulse buying choice in each situation. The results of this part were analysed mostly by descriptive statistics. The steps of analysis are the following: first, people who made an impulse buying choice will be identified in each situation by the “select case” function of SPSS; then, the descriptive analysis will reveal how utilitarian or informational reinforcement was rated by impulse buyers in each situation. Frequency analysis will then be used to identify the reinforcement that was most rated by impulse buyers in each situation.

Analysis

Firstly, the Pearson correlation test confirmed that there are significant relationships between consumer impulse buying choice and both types of reinforcement. Consumer CCIB was found to be strongly related to the utilitarian reinforcement total scores ($r = 0.726$; $p < 0.001$) and informational reinforcement ($r = 0.603$; $p < 0.001$). These relationships were further found to be significant between reinforcement and consumer impulse buying choice in both open and closed settings, as the table below shows.

Pearson Correlation Test of Reinforcement and CCIB

		CCIB TOTAL	OPEN CCIB	CLOSED CCIB
CCU TOTAL	Pearson Correlation	.726**	.610**	.510**
	Sig. (2-Tailed)	.000	.000	.000
	N	414	414	414
CCI TOTAL	Pearson Correlation	.603**	.466**	.459**
	Sig. (2-Tailed)	.000	.000	.000
	N	414	414	414

In the following section, a descriptive analysis of SPSS reveals which reinforcement is mostly frequently anticipated by the respondents when they make an impulse buying choice in each situation.

Situation CC1 – Luxury shopping

The frequency test shows that the most important reinforcement is U3, “I like it”, as 51 out of 61 impulse buyers in this situation chose this reinforcement. I5, “it’s something that fits my taste”, and U1, “item on sale”, were also found to be important in this situation, as both reinforcements were chosen by 48 out of 51 impulse buyers in this situation. Moreover, 44 out of 51 impulse buyers here also reported I3 as the reinforcement “buying it will make me happy”.

Situation CC2 – High-end dining

The descriptive statistics reveal that informational reinforcement has a higher mean in this situation ($M = 0.7826$; $SD = 1.39736$) than utilitarian reinforcement ($M = 0.5435$; $SD = 1.17141$). The frequency test shows that I3, “buying it will make me happy”, and I3, “I like it”, are the two most important reinforcements in this situation. Out of 155 impulse buyers, 117 chose I3 and 107 chose U3 as the reinforcement in this situation.

Situation CC3 – Day shopping trip

Again, the descriptive analysis shows that utilitarian reinforcement is the more effective force of impulse buying in this situation, with a higher mean of 3.4348 ($SD =$

2.36998). The further analysis shows that U3, “I like it”, is again the most important utilitarian reinforcement in this situation (N = 282; 68.1%), followed by U1, “item on sale” (N = 254; 61.4%), and U2, “useful” (N = 245; 59.2%).

Situation CC4 – Inescapable shopping trip

For situation CC4, utilitarian reinforcement was found to have a higher mean (M = 2.2246; SD = 2.42969) than informational reinforcement (M = 1.0652; SD = 1.55857). The frequency test reveals that the most important utilitarian reinforcement here is U3, “I like it”. Out of 219 total impulse buyers in this situation, 184 of them reported U3 as their reinforcement, followed by U1, chosen by 165 respondents.

Situation CC5 – Personal collection

In this case, utilitarian reinforcement has a slightly higher mean (M = 1.9179; SD = 2.22206) than informational reinforcement (M = 1.1594; SD = 1.53528). In fact, the frequency test shows that the most important reinforcement in this situation is U4, “what I’ve been looking for” (N = 198 out of 220 impulse respondents), followed by I3, “buying it will make me happy” (N = 177 out of 220 impulse respondents). U3, “I like it”, is also one of the most frequent reinforcements reported by impulse buyers in this situation. Out of 220 respondents, 176 chose U3 as the reinforcement in this situation.

Situation CC6 – Credit card reward points

Utilitarian reinforcement (M = 0.2585; SD = 1.00765) here reached a slightly higher mean than informational reinforcement (M = 0.1111; SD = 0.57572). A further analysis indicates that U2, “useful”, and U3, “I like it”, are the most chosen reinforcements in this situation, as 23 out of 31 impulse buyers chose U2 and 22 respondents chose U3.

Situation CC7 – Routine shopping in the supermarket

The descriptive statistics of SPSS were used to compare the mean of utilitarian and informational reinforcement. Utilitarian reinforcement has a much higher mean (M = 4.2488; SD = 1.74900) than informational reinforcement (M = 1.6256; SD = 1.37160). Hence, utilitarian reinforcement has a greater influence than informational

reinforcement on the consumer impulse buying choice.

A further frequency analysis was undertaken to indicate which form of utilitarian reinforcement is the most important in this situation. The result shows that U3, “I like it”, is the most important utilitarian reinforcement, as 80.4% of the impulse buyers chose it as the likely reason. The U1, “item on sale”, was also found to be very effective, as 79.2% of impulse buyers in this situation reported it as the likely reason.

Situation CC8 – Bar last call

The descriptive analysis calculated the mean of utilitarian and informational reinforcement in situation CC8. Informational reinforcement ($M = 0.8406$; $SD = 1.47413$) was slightly higher than utilitarian reinforcement ($M = 0.7440$; $SD = 1.32846$). The frequency test shows that out of 158 respondents who reported that they would buy on impulse in this situation, 111 respondents chose I3 “buying this would make me happy” as the reinforcement, which makes I3 the most important informational reinforcement in this situation.

Discussion

To conclude, these results support the study proposition that both utilitarian and informational reinforcement can have positive effects on the consumer impulse buying choice. The data analysis in this section examined whether the levels of reinforcement in each situation fit the prediction of the BPM matrix. For instance, the BPM matrix predicts that in the routine shopping situation, both utilitarian and informational reinforcement should be relatively low; however, this study shows that, for impulse buyers, even a routine shopping trip can signal high utilitarian reinforcement, which leads to impulse buying behaviour.

The table below shows the means of utilitarian and informational reinforcement in each situation. As the table indicates, situation CC8 is the only situation in which informational reinforcement is higher than utilitarian reinforcement. *Situation CC3* has the highest *utilitarian reinforcement* mean of all eight situations, while *situation CC1* has the highest *informational reinforcement* mean. Once again, the result of this

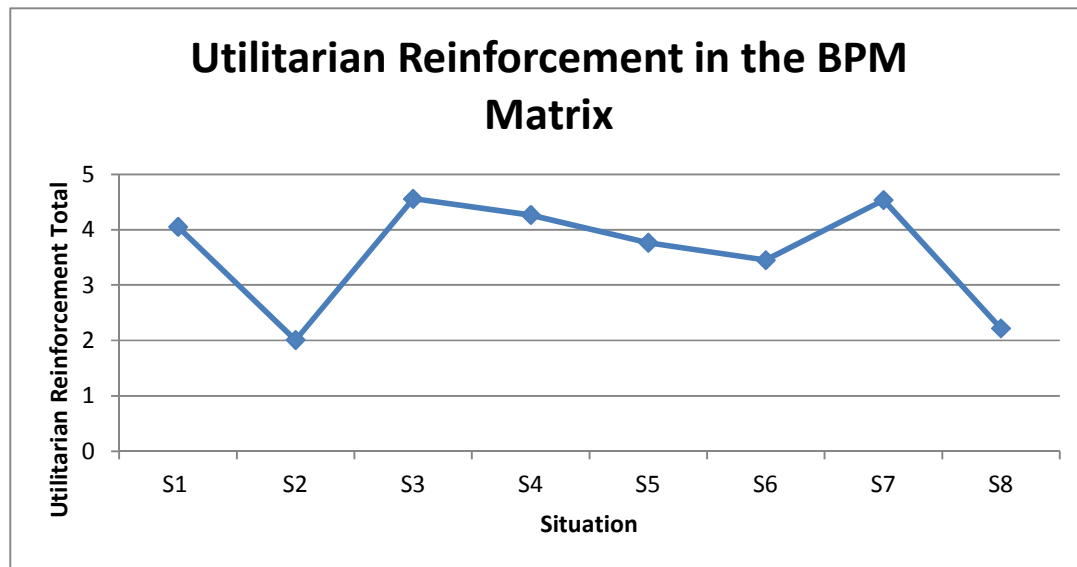
section shows that whether it is utilitarian or informational reinforcement that has a higher influence on consumer impulse buying depends on the situation.

Table 15: Mean of Utilitarian and Informational Reinforcement of Impulsive Respondents in the BPM Matrix

	CC1	CC2	CC3	CC4	CC5	CC6	CC7	CC8
UR	4.0508	2.0089	4.5576	4.2638	3.7630	3.4516	4.5335	2.2158
IR	3.2115	2.3823	2.4908	2.5200	2.5668	2.4210	2.1850	2.7401

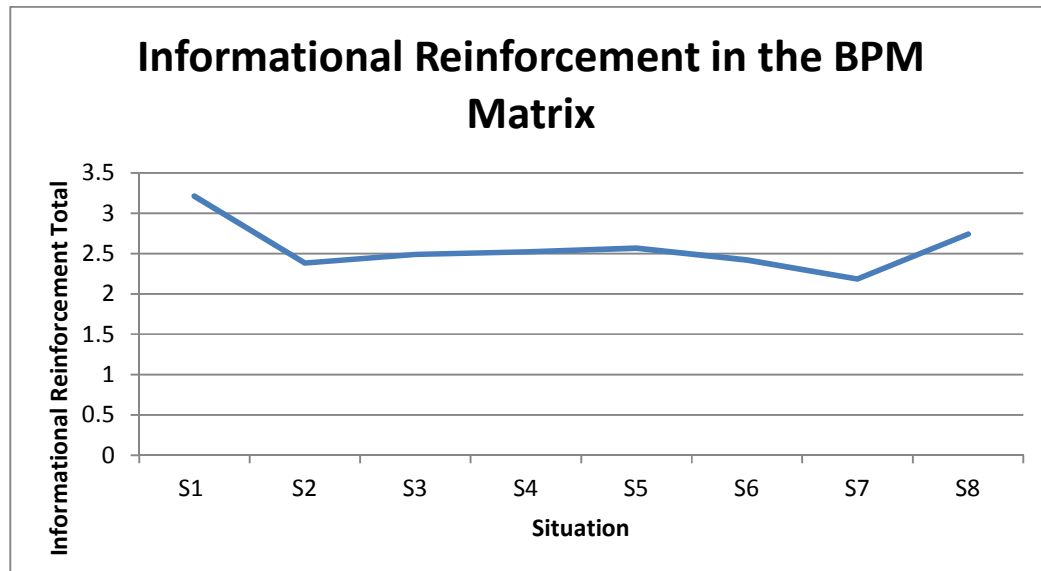
For instance, the results of this section also reveal the strength of utilitarian and informational reinforcements of impulse buying in each situation. The results show that utilitarian reinforcement is stronger than informational reinforcement in most of the situations, except for situation CC8 relating to *mandatory consumption* (bar last call). This result seems to be contrary to the BPM matrix prediction, as mandatory consumption is supposed to be a closed setting in which both utilitarian and informational reinforcement would be low. In this study, not only was informational reinforcement found to be higher than utilitarian reinforcement in situation CC8, the informational reinforcement in situation CC8 was also found to be higher than the informational reinforcements in some other situations. The other findings that are inconsistent with the BPM matrix prediction include the following. 1) Situations CC7 (*routine shopping in a supermarket*) and 2 (*day shopping trip*) were found to have the *highest* utilitarian reinforcement among all the situations, as the graph below shows. The BPM predicted that utilitarian reinforcement in these two situations should be relatively low in comparison with other situations, such as CC1 luxury shopping and CC2 status consumption. 2) Situation CC2 (*high-end dining*) was found to have the *lowest* utilitarian reinforcement. This indicates that the interpreting power of the BPM matrix regarding impulse buying behaviour is not as strong as for other forms of consumption behaviour.

Graph 2: Levels of Utilitarian Reinforcement in the BPM Matrix



As regards informational reinforcement, the results in this study could correspond better to the BPM matrix prediction than utilitarian reinforcement. For instance, the *lowest* informational reinforcement was found in situation CC7 (*routine shopping in the supermarket*), whilst the *highest* mean was found in situation CC1 (*luxury shopping*). However, two notable results were found to be contrary to the BPM matrix. 1) Situation CC8 relating to mandatory consumption should have relatively lower informational reinforcement than others, such as situation CC3 regarding a day shopping trip. 2) Situation CC2, status consumption, should have relatively higher informational reinforcement than other situations. A possible explanation could be the design of the situations in this study, although based on the main theme and factors of the BPM matrix (e.g. bar last call as rules of consumption in a closed setting of situation CC8); other factors that could be produced by individual past experience might signal to the respondents other reinforcement when they answered the questionnaire (e.g. a friend's persuasion to buy another drink). Nevertheless, the predicting power of the BPM matrix on informational reinforcement is still greater than on utilitarian reinforcement when it comes to impulse buying behaviour.

Graph 3: Levels of Informational Reinforcement in the BPM Matrix



Study Proposition 6: Impulse buying behaviour can occur in all eight situations within the BPM matrix.

Procedure

Since both utilitarian and informational reinforcement were predicted to influence impulse buying behaviour, this study proposes that impulse buying behaviour can occur in any kind of consumption situation. The frequency test was used to detect the percentage of respondents who would make an impulse buying choice in each situation.

Analysis

In situation CC1 regarding luxury shopping, only 14.7% of the total respondents reported that they would buy on impulse, whilst 85.3% of the respondents reported otherwise. In this situation, utilitarian reinforcement still has a higher mean ($M = 0.5773$; $SD = 1.56616$) than informational reinforcement ($M = 0.4034$; $SD = 1.16614$).

Situation CC1

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	353	85.3	85.3	85.3
	1.00	61	14.7	14.7	100.0
	Total	414	100.0	100.0	

In situation CC2, high-end dining, 62.6% of the respondents reported that they would not buy on impulse, whilst 37.4% of respondents indicated that they would.

Situation CC2

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	259	62.6	62.6	62.6
	1.00	155	37.4	37.4	100.0
	Total	414	100.0	100.0	

Situation CC3 is also proved to be a very likely situation for impulse buying behaviour, as the frequency test shows that 75.8% of the respondents indicated that they would buy on impulse.

Situation CC3

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	100	24.2	24.2	24.2
	1.00	314	75.8	75.8	100.0
	Total	414	100.0	100.0	

In Situation CC4, the numbers of impulse buyers and non-impulse buyers are more similar; impulse buyers account for 52.9% and non-impulse buyers for 47.1% of the total respondents.

Situation CC4

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	195	47.1	47.1	47.1
	1.00	219	52.9	52.9	100.0
	Total	414	100.0	100.0	

Regarding situation CC5, 53.1% of the total respondents indicated that they would buy on impulse, whilst 46.9% of respondents stated otherwise.

Situation CC5

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	194	46.9	46.9	46.9
	1.00	220	53.1	53.1	100.0
	Total	414	100.0	100.0	

The result shows that consumers are less likely to buy on impulse in situation CC6. As the table below reveals, only 7.5% of the total respondents indicated that they would buy on impulse in this situation, whilst 92.5% of the respondents reported otherwise.

Situation CC6

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	383	92.5	92.5	92.5
	1.00	31	7.5	7.5	100.0
	Total	414	100.0	100.0	

As the table below shows, 94.2% of the respondents in this research indicated that they would buy on impulse in situation CC7.

Situation CC7

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	24	5.8	5.8	5.8
	1.00	390	94.2	94.2	100.0
	Total	414	100.0	100.0	

In situation CC8, a greater percentage of the respondents reported that they would not buy on impulse in this situation, whilst only 38.2% of the respondents reported that they would.

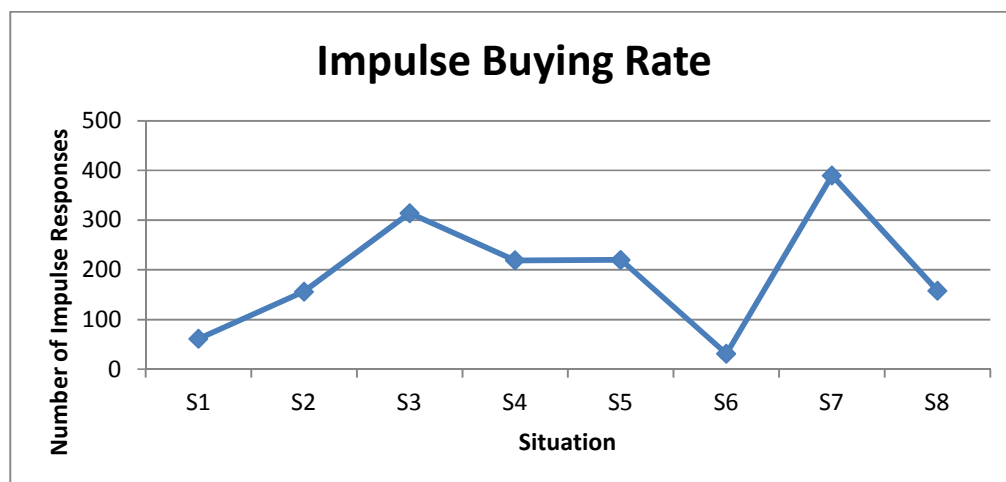
Situation CC8

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	256	61.8	61.8	61.8
	1.00	158	38.2	38.2	100.0
	Total	414	100.0	100.0	

Discussion

The results support the study proposition that different consumer situations of the BPM matrix do have effects on the impulse buying behaviour responding rate, as the graph below shows.

Graph 4: Impulse Buying Rate in the BPM Matrix



Situation CC7, routine shopping in the supermarket, was found to be the situation with the highest impulse buying rate. The majority of the respondents (94.2%) indicated that they would buy on impulse in this situation. This result does not correspond to the proposition made by Foxall (2010) that the temporal discounting that leads to impulse buying behaviour is unlikely to happen in a routine shopping situation, as the reinforcement and punishment in this situation are too low to fit the concept of discounting. Hence, Foxall (2010) argues that the buying behaviour in this situation is more like unplanned buying than impulse buying. However, although this situation was predicted by the BPM matrix as having low utilitarian and informational reinforcement, the results show that impulse buying behaviour in this situation is driven by mostly utilitarian reinforcement.

Therefore, it may be argued that consumers can still be attracted by desired items and buy the things they should not buy because of utilitarian reinforcement. Moreover, the later consequences that define whether a purchase behaviour is impulsive or not need to be examined on individual bases, rather than just from the economic point of view. For example, buying a chocolate bar could be a common unplanned event for consumer A, but it could be an impulsive purchase for consumer B, who has been following a diet for a long time. Thus, even though both consumers pay an affordable price for their chocolate bars, what their chocolate bars mean to their purchase behaviour could be very different. The possible explanations for why impulse buying behaviour was more common in situation CC7 are that 1) the aversive cost of this behaviour is relatively low and, most of the time, affordable; and 2) consumers often frequently visit the store. The utilitarian reinforcements chosen by the respondents here were U1, “item on sale”, and U3, “I like it”. Thus, it is not difficult to understand why supermarkets constantly have sales of various items taking place in-store. This study proves that this marketing strategy is helpful in encouraging impulse buying behaviour in this situation.

The other situation that also has a high rate of impulse buying behaviour is situation CC3, “day shopping trip” (popular entertainment). The same as for situation CC7,

utilitarian reinforcements are the key form of reinforcement in this situation. The other situations corresponding to these two situations but with a closed setting are mandatory consumption (bar last call) and inescapable entertainment (inescapable trip to the mall) in the BPM. Both these closed-setting situations were found to have a lower rate of impulse buying behaviour in this study. Therefore, it could be said that the impulse buying rate would be higher in situations with an *open setting* and *utilitarian reinforcement*.

How open/closed settings influence the impulse buying rate can be further illustrated by situations 5 (private collection) and 6 (credit card reward points). Although both of these situations involve accumulative behaviour, the situation with an *open setting* (*private collection*) has a much higher impulse buying behaviour rate than the one with a closed setting (credit card reward point). In fact, the results show that situation 6 (*credit card reward points*) is the situation that has the lowest impulse buying rate in this study.

Another possible explanation is the distinguishable reinforcements provided by these two situations. Utilitarian reinforcement was found to be the dominant reinforcement in both these situations. U3, “I like it”, was found in both situations. Then, U4, “what I’ve been looking for”, was found in situation 5 and U2, “useful”, was found in situation 6. U4, “what I’ve been looking for”, implies more personal preference than U2, “useful”. In another words, U4 can be said to be a *stronger* utilitarian reinforcement than U2. If an item is not only useful but also appeals to the consumer very much, the reinforcement of purchasing that item could be more than just utilitarian. Therefore, informational reinforcement such as “buying it would make me happy” was found in the situation of private collection, but not in situation 6.

Interestingly, when it comes to situation CC1 and situation CC2, it is the *closed* setting that has a slightly higher impulse buying rate in this study. One possible explanation is that the situation of status consumption designed in this study is more likely to have a lower aversive cost than luxury shopping (dining in a high-end restaurant vs. luxury

goods shopping). Also, both utilitarian and informational reinforcements were found in these two situations; this supports the prediction of the BPM matrix that both types of reinforcements would be high in these two situations. In situation CC1 regarding luxury shopping, I5, “it’s something that fits my taste”, was found to be the important reinforcement for the first time in this study, along with U3, “I like it”, and U1, “item on sale”. In situation CC2 of high-end dining, U3, “I like it”, and I3, “buying it would make me happy”, were found to be the key reinforcements.

4-2-6 Predicting impulse buying choice with the individual learning history

6-1: The impulse buying choice in the accomplishment situation is positively correlated with an individual’s impulse buying tendency and impulsivity traits.

Procedure

This study proposition predicts that individual impulsivity traits and impulse buying tendency are positively related to impulse buying behaviour in accomplishment situations. To address this proposition, binary logistic regression was used, as this method is recommended by researchers when the dependent variable is a two-category variable (Anderson, 1982; Howitt & Cramer, 2008). In this study, consumers indicated their impulse buying with “yes” or “no” in each situation. Moreover, logistics regression can provide information such as 1) a prediction of group membership, as it calculates the probability of success over the probability of failure; and 2) the strengths of the predictors among variables (Burns & Burns, 2008). Hence, it is appropriate to use binary logistic regression to predict the impulse buying choice with other independent variables in this study. According to Burns and Burns (2008), the formula of logistic regression can be simplified as:

$$p = \frac{\exp^{(a+b_1x_1+b_2x_2+b_3x_3\dots)}}{1 + \exp^{(a+b_1x_1+b_2x_2+b_3x_3\dots)}}$$

p = the probability that a case is in a particular category,
 exp = the base of natural logarithms (approximately 2.72),
 a = the constant of the equation and
 b = the coefficient of the predictor variables.

Analysis

First of all, a binary logistic regression analysis was used with all the UPPS facets and impulse buying tendency as the independent variables to predict the consumer choice in situation CC1 (luxury shopping). A total of 414 cases were analysed and the model significantly predicted the consumer impulse buying choice (omnibus chi-square = 21.082; $df = 4$, $p < 0.01$). The model accounts for between 5% and 8% of the variance in impulse buying choice, with 100% of non-impulse buyers successfully predicted in this situation. However, only 3.3% of the prediction for impulse buyers is accurate. Overall, the accuracy rate of prediction is 85.7%. The table below shows that only impulse buying tendency is the more reliable predictor in this model. Each unit increase in the impulse buying tendency is associated with an increase in the odds of impulse buying of 1.07.

CC1 Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	PRE TOTAL	.060	.063	.911	1	.340	1.062
	U TOTAL	.095	.061	2.445	1	.118	1.099
	SEN TOTAL	.047	.036	1.680	1	.195	1.048
	PER TOTAL	-.023	.069	.110	1	.741	.978
	IB TOTAL	.063	.026	5.960	1	.015	1.065
	Constant	-5.576	1.533	13.221	1	.000	.004

The same test was also performed to predict the impulse buying choice in situation CC2 (high-end dining). All 414 cases were analysed; the full model predicts the impulse buying choice in situation CC2 (omnibus chi-square = 13.345; $df = 5$, $p < 0.05$). The model accounts for between 3.2% and 4.3% of the variance in impulse buying choice, with 92.7% of the non-impulse buyers predicted. Only 11% of the

prediction of impulse buyers was accurate. Overall, this model has a 62.1% accuracy prediction rate. The analysis shows that premeditation is the most reliable predictor of the model ($p < 0.05$), with one unit increase in the premeditation score being associated with an increase in the odds of the impulse buying choice by a factor of 1.166.

Discussion

Overall, this proposition is only partly supported. The results show that using only the impulse buying tendency to predict the consumer impulse buying choice is more accurate in situation CC1, which is the open setting of accomplishment behaviour. Moreover, only one facet of UPPS was found to be a reliable predictor in the accomplishment situations: premeditation in situation CC2. This could suggest that even in accomplishment situations, the activation of consumer impulse buying choice would be significantly different between the open and the closed setting.

6-2: The impulse buying choice in the hedonism situations is positively correlated with an individual's impulse buying tendency and urgency scores.

Procedure

The same analysis – binary logistic regression – was used to test the model that can predict the impulse buying choice in the hedonism situations. The analysis was performed to test the impulse buying choice in situation CC3 (day shopping trip) and situation CC4 (inescapable shopping trip).

Analysis

First of all, binary logistic regression was used to predict the impulse buying choice in situation CC3, with the proposed predictors impulse buying tendency and urgency. The total of 414 cases were analysed in this test, and the full model significantly predicted the impulse buying choice (omnibus chi-square = 45.752; $df = 2$, $p < 0.001$). The model accounts for between 10.5% and 15.6% of the variance in impulse buying choice. Only 13% of the prediction in non-impulse buyers is accurate; however, the significant 96.5% of prediction for the impulse buyers in this situation is accurate.

Overall, this model holds 76.3% of accurate prediction. Moreover, this model shows that the impulse buying tendency is the strongest predictor in this model ($p < 0.001$). A unit of impulse buying tendency increase would lead to an increase of 1.161 factor of impulse buying choice probability.

CC3 Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	U TOTAL	-.024	.053	.205	1	.651	.976
	IB TOTAL	.150	.027	30.962	1	.000	1.161
	Constant	-2.053	.609	11.382	1	.001	.128

The same analysis was used to predict the hedonism impulse buying behaviour in the closed setting: situation CC4, an inescapable shopping trip. In accordance with the study proposition, the individual impulse buying tendency and urgency scores were used as the predictor in this model. The test of the full model was found to be statistically significant, revealing that the individual variables could reliably predict the impulse buying choice in this situation (omnibus chi-square = 21.004; $df = 2$, $p > 0.000$). This model accounts for between 4.9% and 6% of the variance in impulse buying choice. Only 53.8% of the prediction in non-impulse buyers is accurate. The significant 65.3% of prediction for the impulse buyers in this situation is accurate. Overall, this model holds 59.9% of accurate prediction. Moreover, it shows that the impulse buying tendency is the most reliable predictor in this model. A unit of impulse buying tendency increase would lead to an increase of 1.066 factor of impulse buying choice probability.

Discussion

This study proposition is supported, as the test reveals the significance of the model with the predictors of impulse buying tendency and urgency. However, the impulse buying tendency seems to be a much more reliable predictor than urgency of consumer impulse buying choice in the hedonism situations. As the previous analysis showed that there is a significant difference in urgency scores between impulse buyers and

non-impulse buyers in these situations, we could interpret this finding as urgency still being related to the impulse buying choice, and impulse buyers in these situations being expected to have a higher level of urgency. Hence, the model in this section has higher accurate prediction power for “impulse buyers” than non-impulse buyers.

6-3: The impulse buying choice in the accumulation situations is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation and perseverance scores.

Procedure

The same analysis method – binary logistic regression – was used to address this study proposition, so that we could determine whether the impulse buying tendency, premeditation and perseverance can successfully predict the impulse buying choice in accumulation situations.

Analysis

Firstly, the binary regression was used to predict the impulse buying choice in situation CC5 (private collection) with the impulse buying tendency, premeditation and perseverance as the predictors in the model. The test shows that the prediction of this model is significant (omnibus chi-square = 16.892; $df = 3$; $p < 0.001$). This model accounts for between 4% and 5.3% of the variance in impulse buying choice. Only 50.5% of the prediction for the non-impulse buyers is accurate. The significant 67.3% of prediction for the impulse buyers in this situation is accurate. Overall, this model holds 59.4% of accurate prediction. Moreover, this model once again shows that the impulse buying tendency is the reliable predictor in this model. A unit of impulse buying tendency increase would lead to an increase of 1.073 factor of impulse buying choice probability. The same test was also used to predict the impulse buying choice in situation CC6 (credit card reward points). The results show that this model was rejected (omnibus chi-square $p > 0.05$). The test also shows that none of the independent variables could predict the impulse buying choice in this situation.

Discussion

The results show that this study proposition is not applicable in the accumulation situation in a closed setting. Thus, this study proposition is partly rejected. On the other hand, accumulation behaviour in an open setting cannot be statistically related to premeditation and perseverance. Only the impulse buying tendency was found to be a reliable predictor of the consumer impulse buying choice in this situation.

6-4: The impulse buying choice in the maintenance situations is positively correlated with an individual's impulse buying tendency and negatively related to an individual's premeditation scores.

Procedure

This study proposition is also addressed by the analysis of binary regression. This method should be able to reveal whether the impulse buying choice in situation CC7 (routine shopping) and situation CC8 (bar last call) can be successfully predicted. The rationale for using this method was discussed in the previous section.

Analysis

The analysis was firstly used to predict the impulse buying choice in situation CC7 of routine shopping. According to the study proposition, the impulse buying tendency and premeditation score are used as the predictor in this model. The result shows that although the model seemed significant in this case (omnibus chi-square = 15.031; df = 2; $p < 0.001$), the final model with the proposed predictors did not increase the accurate rate of prediction (94.2%). In this case, impulse buyers were 100% predicted, but the prediction rate of non-impulse buyers was shown to be 0%. Furthermore, the impulse buying tendency is the only significant predictor in this model.

CC7 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IB TOTAL	.144	.045	10.432	1	.001	1.155
	PRE TOTAL	-.044	.096	.216	1	.642	.957
	Constant	.275	1.957	.020	1	.888	1.317

This analysis was also used to examine another maintenance situation: situation CC8 referring to the bar last call. The test shows that the proposed model is significant (omnibus chi-square = 20.109; df = 2; $p < 0.000$). This model accounts for between 4.7% and 6.4% of the variance in the impulse buying choice, and 91.0% of the prediction in non-impulse buyers is accurate. Only 20.9% of the prediction for the impulse buyers in this situation is accurate. Overall, this model holds 64.3% of accurate prediction, which increases the prediction power of the constant model. Moreover, this model once again shows that the impulse buying tendency is the most reliable predictor in this model. A unit of impulse buying tendency increase would lead to an increase of 1.064 factor of impulse buying choice probability.

Discussion

The results show that the impulse buying choice in the maintenance situation is also difficult to predict. For instance, in the routine shopping situation, since most of the respondents would choose to buy on impulse, the prediction power of individual learning history variables seems less significant in this case. However, the impulse buying tendency could still be a better predictor than the individual premeditation score in the maintenance situations. Thus, the conclusion of this part of the analysis is that the study proposition is only partly supported by the results. Similar to the other situations, the impulse buying tendency has been found to be a reliable predictor of an individual's impulse buying choice in most of the consumption situations.

Notably, the impulse buying tendency is used as an indicator of consumers' past experience and pattern of impulse buying, rather than personality traits. It could be argued that the IBT is a better indicator of the impulse buying choice in many

situations because people who have a high IBT are already established impulse buyers. Impulse buying is simply the method of their shopping, an established behavioural pattern of their buying behaviour.

4-3 Predicting Impulse Buying Choice

The previous sections of this chapter have tested the study propositions regarding how each element of the BPM is related to the impulse buying choice. Foxall (1992; Foxall, 1997) explains that consumer behaviour is the joint effect of the consumer behavioural setting and the individual learning history. This section aims to establish this model by generating the previous results of this chapter to predict the impulse buying choice in each situation of the BPM matrix.

Procedure

The binary regression test is again applied in this section to predict the impulse buying choice in each situation. Both the consumer behavioural setting and the individual learning history variables are included here in the analysis to examine the joint effect on impulse buying behaviour, as the BPM model states. The previous analysis has already provided knowledge on which behavioural setting and learning history variables could be related in each situation, as the table below shows. Therefore, these factors generated from the results in the previous section in this chapter are used as the independent variables to predict the consumer impulse buying choice in each situation.

Table 16: BPM Matrix, Behavioural Setting and Learning History

Situation	Setting	UPPS	IB tendency	Culture
S1	Physical	Urgency	Y	Y
S2	Temporal/social/ physical	Premeditation	Y	Y
S3	Physical	Premeditation/urgency	Y	Y
S4	All factors	Urgency	Y	Y
S5	n/a	Sensation seeking	Y	Y
S6	n/a	n/a	N	N
S7	n/a	n/a	Y	Y
S8	Temporal/social	Premeditation/urgency/ sensation seeking	Y	Y

Analysis

Situation CC1 (luxury shopping)

The previous results derived the useable predictors to forecast the impulse buying choice in situation CC1. They are the physical factors of behavioural setting, urgency, impulse buying tendency and individual cultural background. The test shows that the model is statistically significant (omnibus chi-square = 24.816; $df = 4$; $p < 0.000$). However, the model shows that it is more efficient to predict the non-impulse buyers, as an accurate prediction rate up to 99.7% was achieved, with only a 1.6% prediction rate found for impulse buyers. Overall, the final model has 85.3% of accuracy prediction. However, among all the predictors, only individual nationality is close to significant as the most reliable predictor ($p = 0.51$).

CC1 Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
U TOTAL	.109	.060	3.360	1	.067	1.116
IB TOTAL	.038	.027	2.056	1	.152	1.039
PHY TOTAL	.116	.062	3.509	1	.061	1.122
NATIONAL(1)	.591	.303	3.802	1	.051	1.806
Constant	-5.367	.849	39.999	1	.000	.005

Situation CC2 (high-end dining)

According to the previous results, the likely predictors in this model are the temporal, social and physical factors of the behavioural setting, premeditation, impulse buying tendency and individual cultural background. The binary logistic regression shows that the final model is significant (omnibus chi-square = 42.674; $df = 6$; $p < 0.000$). The model accounts for between 9.8% and 13.4% of the variance in the impulse buying choice. The final model also increases the overall prediction rate to 66.7%, with an 85.3% accurate prediction rate for non-impulse buyers and a 35.5% accurate prediction rate for impulse buyers. The model also shows that physical factors and cultural background are significant predictors in this model.

CC2 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IB TOTAL	.028	.019	2.133	1	.144	1.028
	NATIONAL(1)	-.725	.233	9.681	1	.002	.484
	PHY TOTAL	.208	.053	15.522	1	.000	1.232
	PRE TOTAL	.120	.049	5.959	1	.015	1.128
	TEM TOTAL	.058	.060	.925	1	.336	1.060
	SO TOTAL	-.086	.049	3.081	1	.079	.918
	Constant	-4.000	1.103	13.162	1	.000	.018

Situation CC3 (day shopping trip)

According to the previous results, the possible predictors of impulse buying choice in situation CC3 are the physical factors of the behavioural setting, premeditation, urgency, impulse buying tendency and cultural background. Hence, the proposed model for situation CC3 includes all these variables in the logistic regression test. This test shows that the proposed model is significant (omnibus chi-square = 75.364; df = 5, $p < 0.000$). This model also accounts for between 16.6% and 24.9% of the variance in the impulse buying choice. Moreover, the full model successfully increases the prediction rate from 75.8% of the constant model to 79.2% overall. The prediction accuracy rate is 26% for the non-impulse buyers and 96.2% for the impulse buyers in this situation. Thus, this model can be seen as successful. The impulse buying tendency and cultural background were found to be the significant predictors in this model.

CC3 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IB TOTAL	.130	.030	18.996	1	.000	1.139
	NATIONAL(1)	1.433	.284	25.437	1	.000	4.190
	PRE TOTAL	.015	.057	.064	1	.800	1.015
	U TOTAL	-.001	.056	.001	1	.980	.999
	PHY TOTAL	.098	.050	3.806	1	.051	1.103
	Constant	-3.494	1.302	7.197	1	.007	.030

Situation CC4 (inescapable shopping trip)

The previous results reveal that the possible predictors of impulse buying choice in situation CC4 are all behavioural setting factors: urgency, impulse buying tendency and individual cultural background. These variables were included in the proposed model in a binary logistic regression test. The test shows that the final model is significant (omnibus chi-square = 52.061; df = 4; $p < 0.000$). The model accounts for between 11.8% and 15.8% of the variance in impulse buying choice. The accurate prediction rate has increased to 66.7% overall, with 57.9% of the accuracy prediction rate for non-impulse buyers and 74.8% of the accuracy rate for the impulse buyers in this situation. This model shows that the impulse buying choice in CC4 can be predicted by the behavioural setting and impulse buying tendency. Furthermore, cultural background was found to be a significant predictor in this model.

Situation 4 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	U TOTAL	.032	.044	.539	1	.463	1.033
	IB TOTAL	.066	.021	9.838	1	.002	1.068
	SET TOTAL	.051	.018	7.900	1	.005	1.052
	NATIONAL(1)	-.824	.225	13.384	1	.000	.439
	Constant	-3.004	.675	19.776	1	.000	.050

Situation CC5 (private collection)

According to the previous results, the proposed predictors of impulse buying choice in situation 5 are sensation seeking, impulse buying tendency and cultural background. The binary logistic regression test shows that the final model increases the prediction power of the constant model significantly (omnibus chi-square = 26.010; df = 3; $p < 0.000$). The model accounts for between 6.1% and 8.1% of the variance in impulse buying choice. The accurate prediction rate has increased to 61.1% overall, with 54.1% of the accuracy prediction rate for the non-impulse buyers and 67.3% of the accuracy rate for the impulse buyers in this situation. The impulse buying tendency was found to be the strongest predictor in this model, followed by sensation seeking.

Situation 5 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IB TOTAL	.059	.017	12.046	1	.001	1.060
	NATIONAL(1)	.161	.209	.590	1	.442	1.174
	SEN TOTAL	.078	.027	8.196	1	.004	1.081
	Constant	-2.255	.508	19.734	1	.000	.105

Situation CC6 (credit card reward points)

According to the previous results, none of the behavioural settings or the learning history variables were found to be related to the impulse buying choice in this situation. Therefore, we could only conclude that the impulse buying choice in situation 6 cannot be efficiently predicted based on the data of this study.

Situation CC7 (routine shopping)

Since none of the consumer behavioural setting factors was found to be related to the choice in situation CC7, the proposed model attempts to predict the impulse buying choice in situation CC7 with the impulse buying tendency and cultural background as the predictors. The logistic regression test shows that the full model is statistically significant (omnibus chi-square = 20.921; df = 2; $p < 0.000$). This shows that the impulse buying tendency and cultural background are reliable predictors of impulse buying choice in situation CC7. The model accounts for between 4.9% and 13.8% of the variance in impulse buying choice. As the table below shows, the impulse buying tendency is the better predictor in this model. Nevertheless, both the impulse buying tendency and the cultural background significantly contribute to the model.

Situation CC7 Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	IB TOTAL	.145	.044	10.850	1	.001	1.157
	NATIONAL(1)	1.182	.520	5.170	1	.023	3.260
	Constant	-.819	.925	.785	1	.376	.441

Situation CC8 (bar last call)

According to the previous findings, the likely predictors of impulse buying choice in situation CC8 are the temporal and social factors of the behavioural setting, impulse buying tendency, cultural background, premeditation, urgency and sensation seeking. The logistic regression test shows that the proposed model is significantly successful (omnibus chi-square = 133.887; df = 7; $p < 0.000$). The model accounts for between 27.6% and 37.6% of the variance in impulse buying choice. The accurate prediction rate has increased to 76.3% overall, with 82.8% of the accuracy prediction rate for the non-impulse buyers and 65.8% of the accuracy rate for the impulse buyers in this situation. Furthermore, the cultural background and sensation seeking were found to be the strongest predictors in this model ($p < 0.001$).

CC8 Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a U TOTAL	.064	.053	1.412	1	.235	1.066
IB TOTAL	.046	.024	3.790	1	.052	1.047
NATIONAL(1)	1.770	.258	47.156	1	.000	5.870
TEM TOTAL	-.055	.065	.721	1	.396	.946
SO TOTAL	-.061	.049	1.542	1	.214	.941
SEN TOTAL	.166	.033	25.131	1	.000	1.181
PRE TOTAL	-.022	.055	.165	1	.684	.978
Constant	-3.776	1.268	8.867	1	.003	.023

Discussion

The contribution of this part of the analysis is to provide each consumption situation with an efficient model to predict the consumer impulse buying choice. Except for situation 6, concerning credit card reward points, all the other situations mapped by the BPM matrix were able to establish their very own model to predict the consumer impulse buying choice. A summary of each model is listed below.

Table 17: The Results of Significant Predictors of the Impulse Buying Choice

Situation	Predictors
CC1	Culture is close to significant ($p = 0.051$)
CC2	Physical factors, premeditation, culture
CC3	Impulse buying tendency, culture
CC4	Behavioural setting total scores, impulse buying tendency, culture
CC5	Impulse buying tendency, sensation seeking
CC6	n/a
CC7	Impulse buying tendency, culture
CC8	Culture, sensation seeking

Several interesting points can be derived from the results. Firstly, this part of the analysis aims to contribute to the exploration of the joint effect of the behavioural setting and individual learning history on the impulse buying choice, as the BPM model predicts. The results show that some of the variables were found not to be significant as the predictors in this section when such interaction between variables is taken into account. For example, several factors, such as physical factors, urgency and impulse buying tendency, were found to be related to the impulse buying choice in situation CC1 of luxury shopping. However, none of these actors was found to be a significant predictor in this model. The explanation could be that the antecedent variables included in this model were not the main discriminative stimuli of such behaviour. As behaviour in this situation is proved to driven by high utilitarian and informational reinforcement, it is possible that the antecedent variables in this study could not completely represent how these reinforcements can be signalled by the behavioural setting and individual learning history factors listed in this study.

Secondly, consumer behavioural setting factors would be more important in the closed settings than in the open settings for the consumer impulse buying choice. For instance, only the physical factor was listed as a predictor for the hedonism impulse buying choice in the open setting (S2: day shopping trip). However, all the consumer behavioural setting factors were found to be predictors of the hedonism impulse buying choice in the closed setting (S4: inescapable shopping trip). This finding corresponds to Foxall's original illustration of open and closed settings (Foxall, 1992; Foxall & Greenley, 1999). In summary, the impulse buying choice is the result of the joint effect

of the behavioural setting and the individual learning history. More importantly, the variables of the behaviour setting or learning history that can efficiently predict the impulse buying choice depend on the situation. This study can be seen as the first attempt to conduct impulse buying research that maps out efficient variables of the impulse buying choice in different situations.

Finally, the results of this part further highlight once again the main argument of this thesis, which is that impulse buying behaviour should be examined in specific consumption situations, as situational influences have a strong effect on impulse buying behaviour. Even taking both external and individual factors into account at the same time, the factors that predict the impulse buying choice vary in each different consumption situation.

4-4 Further Analysis

As the questionnaire of this study also provides other information, such as sex and gender role, it would be useful to explore other perspectives of individual impulse buying behaviour. This could be helpful for generating the discussion and offering a more complete picture of impulse buying behaviour.

4-4-1 Cultural differences

One aim of this study is to contribute to the cross-cultural prospect of the impulse buying behaviour literature. The analysis in this part will examine whether there is any difference between British and Taiwanese consumers regarding the pre-purchase (behavioural setting and learning history), purchase (impulse choice in BPM matrix) and post-purchase (reinforcement) stages of impulse buying behaviour. This study also includes individual masculinity and femininity as the complementary part of cultural backgrounds, which are also analysed in this section.

First of all, the independent t-test was used to examine whether there is a significant difference between British and Taiwanese consumers in the consumer behavioural setting effect. The result shows that there is a significant difference between British

and Taiwanese consumers in the consumer behavioural setting total scores ($t = -4.946$; $df = 412$; $p < 0.001$). The results show that Taiwanese consumers have a higher mean of the behavioural setting total score ($M = 32.4085$; $SD = 6.12044$) than British consumers ($M = 29.2687$; $SD = 6.79172$). In fact, significant differences between these two groups were also found for the temporal factor ($t = -4.538$; $df = 412$; $p < 0.001$), social factor ($t = -5.282$; $df = 412$; $p < 0.001$) and physical factor ($t = -2.407$; $df = 412$; $p < 0.05$). As the table below indicates, Taiwanese respondents have a higher mean for all the three factors mentioned above than British respondents. There is no difference between Taiwanese and British consumers on regulatory scores ($p > 0.05$). Moreover, a significant difference between masculinity and femininity was only found for physical factors ($t = -2.125$; $df = 157$; $p < 0.05$), with the femininity group having a higher mean ($M = 9.8352$; $SD = 2.60454$) than the masculinity group ($M = 8.9265$; $SD = 2.74985$).

Table 18: Cultural Differences in Consumer Behavioural Setting

	NATIONAL	N	Mean	Std Deviation	Std Error Mean
SET TOTAL	BRITISH	201	29.2687	6.79172	.47905
	TAIWANESE	213	32.4085	6.12044	.41937
TEM TOTAL	BRITISH	201	6.4776	1.99518	.14073
	TAIWANESE	213	7.3662	1.98750	.13618
SO TOTAL	BRITISH	201	10.9055	2.80107	.19757
	TAIWANESE	213	12.3474	2.75261	.18861
PHY TOTAL	BRITISH	201	8.9453	2.59846	.18328
	TAIWANESE	213	9.5634	2.62283	.17971
REG	BRITISH	195	3.1795	1.24503	.08916
	TAIWANESE	213	3.1315	1.27812	.08758

Differences between Taiwanese and British consumers are also revealed for some variables of learning history in this study. The table below shows the means of UPPS and IB tendency of Taiwanese and British respondents. The independent t-test reveals that there are differences between these two groups relating to premeditation ($t = -3.409$; $df = 412$; $p < 0.01$), sensation seeking ($t = 4.457$; $df = 391.640$; $p < 0.001$) and IB tendency score ($t = 3.649$; $df = 385.169$; $p < 0.001$). Taiwanese respondents have

higher means of premeditation ($M = 15.0939$; $SD = 2.35537$) than British respondents ($M = 14.2886$; $SD = 2.45078$), while British consumers show higher sensation seeking ($M = 12.1891$; $SD = 4.11875$) than Taiwanese consumers ($M = 10.5164$; $SD = 3.46627$). No significant difference was found on the perseverance and urgency scales ($p > 0.05$), although British samples had a slightly higher means value than Taiwanese respondents. Furthermore, British respondents were found to have a higher IB tendency ($M = 25.5437$; $SD = 6.95910$) than Taiwanese respondents ($M = 23.2676$; $SD = 5.64005$) in this study. There is no difference for any of the UPPS facets between masculinity and femininity ($p > 0.05$).

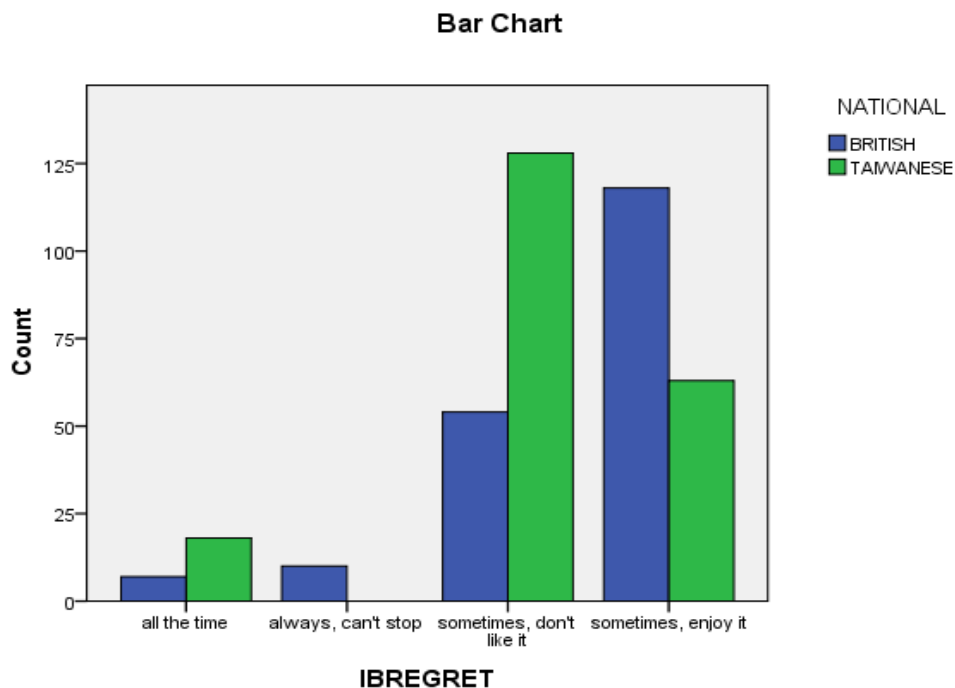
Table 19: Cultural Differences in UPPS and IB Tendency

	NATIONAL	N	Mean	Std Deviation	Std Error Mean
PRE TOTAL	BRITISH	201	14.2886	2.45078	.17286
	TAIWANESE	213	15.0939	2.35537	.16139
U TOTAL	BRITISH	201	10.7861	3.01811	.21288
	TAIWANESE	213	10.4883	2.57273	.17628
SEN TOTAL	BRITISH	201	12.1891	4.11875	.29051
	TAIWANESE	213	10.5164	3.46627	.23751
PER TOTAL	BRITISH	201	11.7960	2.45218	.17296
	TAIWANESE	213	11.6103	1.87669	.12859
IB TOTAL	BRITISH	201	25.5473	6.95910	.49086
	TAIWANESE	213	23.2676	5.64005	.38645

The respondents of this study were asked if they regret about their own impulse buying behaviour. They could choose between 1) sometimes, so I don't like it; 2) all the time; 3) all the time, but I can't stop; 4) sometimes, but I enjoy it. This finding could help to explain different types of impulse buyers and whether some of them are in the process of becoming problematic impulse buyers (e.g. feel like they cannot stop their own impulse buying behaviour). This question has been seen as the self-reported impulse buying attitude in this study.

The cross-tabulation chi-square analysis was used to detect the differences between these two groups regarding consumer self-reported impulse buying attitude. The Pearson chi-square also shows that there is a significant difference between Taiwanese and British respondents in IB attitude ($p < 0.001$). Most of the Taiwanese respondents (61.2%) reported that they sometimes regret their impulse buying behaviour and therefore they do not like it, whilst most of the British respondents (62.4%) indicated that although they do sometimes regret it, they enjoy their impulse buying behaviour. Meanwhile, 5.3% of British respondents reported “always regret but can’t stop”, whilst none of the Taiwanese respondents reported this option. No significant difference was found between masculinity and femininity concerning IB attitude ($p > 0.05$). The chart below illustrates the difference in IB attitude between Taiwanese and British respondents.

Figure 8: Cultural Difference in Regret



The previous analysis showed that there are significant cultural differences in the consumer impulse buying choice in each situation. Here, the independent t-test of

selected cases (only the impulse buyers in each situation were used for analysis) was used to examine whether there is any cultural difference in impulse buying reinforcement in each situation. The results show that cultural differences in reinforcement were only found in situations CC2, CC7 and CC8. In situation CC2, the results show that there is a significant difference in the informational reinforcement score between British and Taiwanese respondents ($t = 2.454$; $df = 153$; $p = 0.015$). British respondents ($M = 2.4912$; $SD = 1.53673$) scored higher than Taiwanese respondents ($M = 1.8571$; $SD = 1.55980$) on informational reinforcement in situation CC2.

In situation CC7, routine shopping, there is a significant difference in the utilitarian reinforcement score between British and Taiwanese respondents ($t = -3.283$; $df = 388$; $p = 0.001$). Taiwanese respondents ($M = 4.7474$; $SD = 1.38202$) scored higher than British respondents ($M = 4.2755$; $SD = 1.45553$) on utilitarian reinforcement. No difference was found regarding informational reinforcement ($p > 0.05$). As for situation CC8, there is a significant difference between Taiwanese and British respondents regarding the informational reinforcement score ($t = 2.255$; $df = 156$; $p = 0.026$) but not the utilitarian reinforcement score ($p > 0.05$). British respondents ($M = 2.3577$; $SD = 1.66512$) scored higher on the informational reinforcement score than Taiwanese respondents ($M = 1.6571$; $SD = 1.45406$) in this situation.

As for masculinity and femininity, the cross-tabulation chi-square test showed that there are differences between groups in the impulse buying choice in two situations. In situation CC3, the day shopping trip ($p < 0.05$), the femininity group made more impulse buying choices than the masculinity group. In situation CC8 ($p < 0.05$), a greater percentage of respondents in the masculinity group made the impulse buying choice in this situation. No significant difference was found between masculinity and femininity concerning impulse buying reinforcement.

Discussion

It is the aim of this study to contribute cross-cultural data to impulse buying research.

Several interesting findings were made in this study. Also, this study found that masculinity and femininity as a cultural background variable are less significant for impulse buying behaviour than nationality, suggesting that nationality is the better predictor when cultural difference is examined in the context of impulse buying behaviour.

For the pre-purchase stage, cultural differences were found for *both* behavioural setting and learning history variables. Firstly, the result shows that behavioural setting factors such as *physical*, *temporal* and *social* factors have a greater influence on *Taiwanese* consumers' impulse buying behaviour. This could suggest that the retail setting and marketing strategy would be important for prompting Taiwanese consumers' impulse buying behaviour. The factors that could help the impulse buying settings could be physical, such as "window display or store atmosphere", temporal, such as "special shopping occasion or events", and social, for example "service quality of sales assistant in-store".

On the other hand, the British consumers seem to be the more impulsive shoppers in this study. Not only did they report a higher IB tendency, they also have a higher level of impulsivity measured by UPPS. The British respondents in this study have significantly lower premeditation scores but higher sensation-seeking scores. This could further suggest that impulse buying behaviour is a more common shopping pattern for British consumers. This also reflects how British consumers evaluate their impulse buying, as more than half of them reported that even though sometimes they regret it, they enjoy their own impulse buying behaviour.

Finally, the results show that utilitarian reinforcements have a greater effect on Taiwanese consumers, whilst informational reinforcements have a greater effect on British consumers. Since this study also found that more British consumers reported that they enjoy impulse buying, it could imply that impulse buying serves more as pleasure or fun for British consumers. Hence, more British consumers' impulse buying behaviour would be influenced by the indirect feedback of the purchase, such as

informational reinforcement. In summary, cultural differences in impulse buying have been found in all the pre-purchase, purchase and post-purchase stages. This result further proves the logical rationale for including individual cultural background as an individual learning history variable.

4-4-2 Self-reported regret

The consumer learning history can be indirectly obtained by verbal reported attitude (Foxall, 1994), and the operant theory has long been linked to attitude formation (Foxall & Yani-de-Soriano, 2005). Therefore, although self-reported regret of impulse buying is not included as one of the learning history variables in this study, examining this data with other variables could help to gain a better insight into individual impulse buying behaviour. The one-way ANOVA test was used to investigate the IB tendency and individual regret. The test shows that there is a strong relation between individuals' IB tendency and attitude towards impulse buying behaviour ($p < 0.01$). The respondents who reported that they always regret but cannot stop impulse buying behaviour were those who scored the highest mean for IB tendency ($M = 33.6000$). The second highest score was detected in the group that reported that they sometimes regret impulse buying, but that they also enjoy it ($M = 26.0166$).

IBT and Regret

IB REGRET	N	Subset for alpha = 0.05	
		1	2
sometimes, don't like it	182	22.3901	33.6000
all the time	25	25.0800	
sometimes, enjoy it	181	26.0166	
always, can't stop	10		

UPPS was also examined with the respondents' self-reported regret towards impulse buying. The respondents reported whether they regret their own impulse buying behaviour by choosing answers from "all the time", "sometimes, so I don't like it", "sometimes but I enjoy it" or "always, but I can't stop". The one-way ANOVA test

reveals that there are several differences between these four groups of respondents. First of all, the total score for premeditation was found to differ significantly between these four groups ($p < 0.01$). The Waller–Duncan post hoc test shows that the respondents who reported that they always regret but cannot stop impulse buying have the lowest mean of premeditation ($M = 11.7000$), whilst the respondents who reported that they sometimes regret and they do not like impulse buying have the highest mean of premeditation ($M = 15.1868$).

Premeditation and Regret			
IB REGRET	N	Subset for alpha = 0.05	
		1	2
always, can't stop	10	11.7000	
all the time	25		14.3200
sometimes, enjoy it	181		14.4530
sometimes, don't like it	182		15.1868

Similarly, a significant difference was found between these four groups regarding the urgency score ($p < 0.01$). On the contrary, the respondents who reported “always regret but can’t stop” have the highest mean on the urgency scale ($M = 13.2000$), followed by the respondents who reported that they regret “all the time” ($M = 11.9200$). In this case, the respondents who reported “sometimes, so I don’t like it” have the lowest mean on the urgency scales ($M = 10.3242$), as the table shows.

Urgency and Regret			
IB REGRET	N	Subset for alpha = 0.05	
		1	2
sometimes, don't like it	182	10.3242	
sometimes, enjoy it	181	10.7182	
all the time	25	11.9200	11.9200
always, can't stop	10		13.2000

Sensation seeking was also found to be significantly different between the four groups

($p < 0.05$). More specifically, the respondents who reported that they sometimes regret impulse buying but that they enjoy this behaviour have the highest mean of the sensation-seeking score ($M = 12.0331$), followed by the respondents stating “always, but can’t stop”. The respondents who reported regret all the time have the lowest mean of sensation seeking ($M = 10.4800$), as the table shows below.

Sensation Seeking and Regret

IB REGRET	N	Subset for alpha = 0.05
		1
all the time	25	10.4800
sometimes, don't like it	182	10.7637
always, can't stop	10	11.4000
sometimes, enjoy it	181	12.0331

No major difference in the perseverance total score was found between these four groups, although the respondents who reported that they do not like impulse buying have, as expected, the highest mean for perseverance in comparison with the other groups.

This study also used a one-way ANOVA to examine the relationship between self-reported regret and impulse buying reinforcement. The rationale of this investigation is that, although the previous impulse buying literature has often reported that consumers experience regret after their own impulse buying behaviour and list several possible reasons for consumer regret, the ways in which regret of impulse buying is formed are rarely discussed in the literature. This analysis thus provides interesting results: the one-way ANOVA tests reveal significant differences in reinforcements between different types of regret ($p < 0.05$). As expected, consumers who reported that they regret all the time receive the least reinforcement compared with other consumers. However, consumers who reported that they regret all the time but cannot stop anticipate higher reinforcement for their impulse buying behaviour

than other consumers.

Utilitarian Total Score

Waller–Duncan^{a,b,c}

IB REGRET	N	Subset for alpha = 0.05	
		1	2
all the time	25	12.5200	19.4000
sometimes, don't like it	182	13.4121	
sometimes, enjoy it	181	14.2762	
always, can't stop	10		

Informational Total Score

Waller–Duncan^{a,b,c}

IB REGRET	N	Subset for alpha = 0.05	
		1	2
all the time	25	10.6800	19.2000
sometimes, don't like it	182	11.8352	
sometimes, enjoy it	181	13.2928	
always, can't stop	10		

Discussion

In this study, the respondents who reported that they enjoy impulse buying regardless of occasional regret have the highest sensation-seeking mean. Hence, impulse buying behaviour can sometimes be enjoyable and exciting, depending on the situation. The findings of this study correspond to the previous literature that urgency could be an indicator of problematic behaviour (Billieux et al, 2008). It was found to be related to an individual's attitude toward impulse buying. Individuals who reported that they always regret impulse buying but that they cannot stop this behaviour have the highest mean of urgency, and they also expect more reinforcement for their impulse buying behaviour than other consumers. In summary, this supports the point of this thesis that individual impulsivity is one of the sources that lead to impulse buying behaviour and

the behaviour attitude formation.

4-4-3 Sex differences

This part of the analysis could contribute to the research question on the identification of different types of impulse buyers. As the previous analysis in this chapter has already revealed the variety of impulse buying behavioural patterns, the findings of this section could further complement these behavioural patterns' ability to be categorized according to the individual's sex.

Consumer behavioural setting

First of all, the independent t-test reveals that there is a significant sex difference in the total scores of the consumer behavioural setting. Women ($M = 32.7922$; $SD = 5.74154$) are generally affected more by the consumer behavioural setting than men ($M = 28.4754$; $SD = 6.91456$; $p < 0.01$). In fact, women scored higher for all four factors of the consumer behavioural setting than men ($p < 0.01$), with a more significant difference in the social factor (mean men = 10.8187, women = 12.3017). In fact, a further detailed analysis with four independent t-tests shows that women have a higher score than men for all four factors of the behavioural setting ($p < 0.05$), which suggests that the behavioural setting is less influential on men's impulse buying behaviour.

Sex Differences in the Total Behavioural Setting Score

SEX	N	Mean	Std Deviation	Std Error Mean
SET TOTAL MAN	183	28.4754	6.91456	.51114
WOMAN	231	32.7922	5.74154	.37777

Learning history

An independent t-test was used to determine whether there are any significant sex differences in the UPPS scores. First of all, men were found to have a higher premeditation score than women, with a mean value reaching 15.1421 in comparison with women's mean of 14.3550. Thus, the independent t-test reveals that there is a significant sex difference in the premeditation score ($p < 0.01$). Regarding the urgency score, women score slightly higher than men, with a mean of 10.9004 in comparison

with the men's mean of 10.2951. Hence, although there is a difference between men's and women's urgency score, the difference is not as significant as that of the premeditation score ($p < 0.05$). On the other hand, there is a significant difference between men's and women's sensation-seeking score ($p < 0.01$). Men scored higher ($M = 12.1749$) than women ($M = 10.6580$) on the sensation-seeking scale. A sex difference was also found for the perseverance scale ($p < 0.05$), with the women scoring 11.8052 in comparison with the men's 11.5683. In summary, the sex differences are most significant for the premeditation and sensation-seeking scales, as men scored higher on both these two facets of UPPS. Regarding urgency and perseverance, although women had slightly higher scores, the differences were not as strong as those for the other two facets.

Moreover, a Pearson correlation test with selected cases was used to examine how UPPS is related to the IB tendency within each sex. For men, all four facets of UPPS were significantly related to the IB tendency ($p < 0.05$). However, only three facets of UPPS were significantly related to the IB tendency in women ($p < 0.01$). Sensation seeking was only found to be related to the IB tendency in the male samples, not the female sample ($p > 0.05$). Furthermore, an independent t-test was used to examine whether there is a sex difference in the IB tendency. The result showed that the difference is significant ($p < 0.01$), as women ($M = 25.5887$; $SD = 6.38474$) scored higher on the IB tendency than men ($M = 22.8415$; $SD = 6.12166$).

BPM matrix

The cross-tabulation chi-square was used to examine the sex differences in the impulse buying choice in each situation. No significant difference between men and women was found in situations CC1, CC5, CC6 and CC7 ($p > 0.05$). In situation CC3, which represents a day shopping trip, women were found to be more prompt to engage in impulse buying behaviour than men ($p < 0.01$). A similar result was achieved regarding situation CC4. In this situation of an inescapable shopping trip to the mall, there is a significant difference in men and women's impulse buying choice ($p < 0.01$): 60.2% of women indicated that they would buy on impulse in this case, whilst only 43.2% of

men reported the same. The sex difference is also significant in situation CC2 ($p < 0.01$). Women were found to be more prompt to make the impulse buying choice in situation CC2 of high-end dining. Situation CC8 is the only situation in which men seem to be more prompt to engage in impulse buying than women. A sex difference was detected in situation CC8 ($p < 0.05$). The result of this section is summarized in the table below.

Table 20: Sex Differences in Impulse Buying Choice in the BPM matrix

Situation	Sex difference
S1: Routine shopping at the supermarket	None
S2: Day shopping trip	More <i>women</i> are likely to impulse buy
S3: Bar last call	More <i>men</i> are likely to impulse buy
S4: Inescapable trip to the mall	More <i>women</i> are likely to impulse buy
S5: Personal collection	None
S6: Credit card reward points	None
S7: Luxury shopping	None
S8: High-end dining	More <i>women</i> are likely to impulse buy

Reinforcement of impulse buying

The sex differences in self-reported reinforcement of impulse buying were also investigated. The independent t-test with selected cases (only impulse buyers in each situation were used for the analysis) was used to compare the mean of utilitarian and informational reinforcement of men and women's impulse buying. The analysis found sex differences in reinforcement in only two situations: situation CC3 and situation CC8. In situation CC3, a sex difference was found in the informational reinforcement of impulsive choice ($t = -3.122$; $df = 312$; $p = 0.002$). Women ($M = 2.3690$; $SD = 1.38646$) were found have higher informational reinforcement than men ($M = 1.8661$; $SD = 1.42184$) in this situation. A sex difference was also found in the utilitarian reinforcement in situation CC8 ($t = 3.304$; $df = 153.390$; $p = 0.001$). Men ($M = 2.3171$; $SD = 1.60153$) scored higher on utilitarian reinforcement than women ($M = 1.5526$; $SD = 1.3020$) in situation CC8.

Discussion

The results show that there are sex differences in the behavioural setting, learning history, consumer situation and reinforcement of impulse buying behaviour. First of all, sex is a stronger indicator than gender when it comes to the behavioural setting of impulse buying behaviour. *Women* were found to score higher than men for all the factors of the behavioural setting. The finding supports the previous studies that found that women are more sensitive than men to the environment (Meyers-Levy & Maheswaran, 1991) and setting atmosphere (Grewal et al, 2003). This also indicates that the behavioural setting has more influence on women's impulse buying behaviour than men's. This result could also explain why *women have been found to have a higher IB tendency than men* in this study. This could be why *women* were found to have a higher *impulse buying frequency* in the previous literature (Kollat & Willet, 1967; Wood, 1998).

Another learning history variable that has been proposed to influence impulse buying behaviour is UPPS. Sex differences were found for all four UPPS facets, with the most significant differences in the *premeditation* and *sensation-seeking* scales. *Men* were found to have higher scores of premeditation and sensation seeking, whilst *women* have higher urgency and perseverance scores. This result is very similar to the previous study conducted by Billieux et al (2008), which also found that men had significantly higher scores for sensation seeking and slightly lower scores than women for urgency. Previously, this study found that urgency is significantly related to the IB tendency, and no such relationship was found between sensation seeking and the IB tendency. This could imply that *women* are more likely to buy on impulse with a *negative effect* (e.g. to get rid of the current situation hence buying on impulse), since they have a higher level of urgency than men. A similar implication was also made by previous scholars (Billieux et al, 2008).

On the other hand, the result of men scoring higher on sensation seeking echoes the previous literature, as men have often been found to have a higher sensation-seeking tendency (Zuckerman et al, 1978). This study has found that sensation seeking is

related to the IB tendency only when *male* samples were taken into account. In other words, sensation seeking would be an effective learning history variable of impulse buying behaviour for men, but not for women. Previous scholars have also found that testosterone is positively related to sensation seeking (Rosenblitt et al, 2001). Hence, the results of UPPS imply that biological sex should be a better and influential variable of UPPS.

As for the impulse buying situations in this study, the result of the sex difference analysis suggests that *women* are more likely to impulse buy in various situations than men. Women were found to make the impulse purchase choice significantly more than men in the situations of the *day shopping trip*, *inescapable trip to the mall* and *high-end dining*. One explanation is that women were found to have a higher IB tendency and IB frequency than men. Moreover, women were found to have higher urgency scores, while men have higher sensation-seeking scores. The results additionally suggest that urgency, compared with sensation seeking, is more positively related to impulse buying behaviour.

The results of reinforcement could also explain why women are more likely to buy on impulse in these situations: the situations could signal more informational reinforcement to women than to men. This effect is at its most significant in situation CC3, “day shopping trip”, as women scored significantly higher than men on informational reinforcement in this situation. The only situation that was found to have more men making an impulse choice was the situation CC8, “bar last call”. The result also suggests that the reason why men are more likely to buy on impulse in this situation is that men could receive significantly more *utilitarian reinforcement* in situation CC8 than women.

Conclusion

This chapter presented the procedures and the results of the data analysis. The Pearson correlations tests have revealed the relationships between the consumer impulse buying choice and the behavioural setting factors, impulse buying tendency, impulsivity and

two types of reinforcements. The tests, such as cross-tabulations and independent t-tests, have further shown how the consumer impulse buying choice and its relationships with other factors can be influenced by different consumption situations. Overall, the impulse buying tendency and individual cultural background are more reliable predictors of impulse buying choice in comparison with other variables. Nevertheless, the results of this chapter clearly demonstrate situational influences on the consumer impulse buying choice. Each situation was found to have different corresponding factors that contribute to the consumer impulse buying choice. The descriptive analysis also shows that consumers anticipate different kinds of reinforcement depending on their current situation.

This chapter also further addressed the topic of situational influences by testing models that predict the consumer impulse buying choice in the BPM matrix with binary logistic regression. The test firstly attempted to predict the impulse buying choice based on four operant classes of consumer behaviour: accomplishment, hedonic, accumulative and maintenance. The results in this part suggested that whether a situation is an open or closed setting does influence the consumer impulse buying choice, even in the same operant class of behaviour situation. Finally, all the factors generated from the earlier results were also used as independent variables to predict the consumer impulse buying choice in the eight situations. This part of the results highlighted the interpreting power of BPM on the consumer choice as a joint effect of external and individual factors.

This chapter also included some further analysis to complement the understanding of consumer impulse buying behaviour. This section showed that cultural and sex differences in impulse buying behaviour can be found from the pre-purchase to the post-purchase stages of impulse buying, as differences were found in the behavioural setting, individual learning history and anticipated reinforcement. Therefore, these two individual variables could be important for researchers to identify different types of impulse buyers or buying patterns. The further analysis also surprisingly revealed that the ways in which consumers report their regret of impulse buying can be seen as a

useful indicator of different types of impulse buying behavioural patterns.

To conclude, this chapter describes the process of data analysis and the findings that can be used to address the research questions and to verify the study propositions. The results of this chapter have revealed the roles of each BPM component in the consumer impulse buying choice and the significance of the impulse buying choice within the BPM matrix situations. The next chapter will further interpret the findings and provide a general discussion of this study.

Chapter 5 General Discussion

Introduction

The aim of this research is to contribute to the impulse buying research empirical evidence of situational influences on impulse buying behavioural patterns, through the application of radical behaviourism and the BPM. This study defines impulse buying behaviour as “when a consumer makes a purchase choice that provides an immediate reward rather than a delayed but more beneficial outcome within a particular consumption situation”. This definition reveals two crucial points for understanding impulse buying behaviour: exploring the kinds of consumption situation that will be more likely to lead to the impulse buying choice and investigating the types of consumers who would be more likely to make impulse buying choices in a specific situation.

However, these issues remain as knowledge gaps in the existing literature. The existing literature lacks evidence on whether the impulse buying tendency can reliably predict actual impulse buying behaviour across various situations. There is also little discussion of how impulse buying can be formed as a continuous behavioural pattern by personality traits. More specifically, the impulse buying research can benefit from this investigation of the interactions between impulse buying behaviour, its relevant personality traits and various consumption situations and how the post-purchase stages of impulse buying may influence consumer behaviour.

Based on these knowledge gaps, this study has addressed the research question “How do various consumer situations influence impulse buying behaviour?” by identifying the key determinants of impulse buying behaviour in each specific consumer situation. This study has also approached another question – “What types of impulse buying behaviour pattern can be identified?” – by investigating the interactions between impulse buying behaviour and its corresponding personality traits and situations.

The application of radical behaviourism and the BPM also complements the impulse buying research. Eight study propositions have been developed based on the BPM,

which enable the integration of the antecedences of impulse buying behaviour by examining the effects of the consumer behavioural setting and individual learning history, including the IB tendency, impulsivity and cultural background. In order to reveal systematically the situational influences of impulse buying and the reinforcement corresponding to these situations, the application of the BPM matrix was also included in the study propositions. To conclude, the application of the BPM allowed this study to explain impulse buying through identifying the determinants of this behaviour from the pre-purchase and purchase situation to the post-purchase stages and the ways in which the interactions between these determinants affect impulse buying behaviour.

In total, 414 usable questionnaires collected from British and Taiwanese consumers provided the primary data for this study. This chapter integrates the findings and discussions from the previous chapters by evaluating the current findings within the existing impulse buying literature, so that the contributions made by this research can be highlighted. To this end, this chapter is broken down into: 1) the theoretical and practical contributions made by this thesis; 2) the limitations of this study and recommendations for future research; 3) the conclusions drawn from studying impulse buying in the view of radical behaviourism and the BPM.

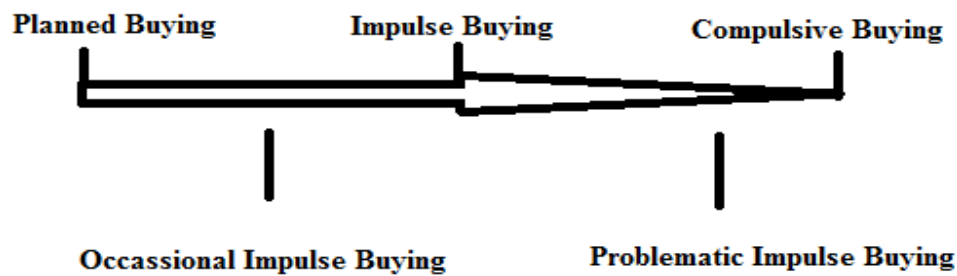
5-1 Theoretical Contributions to Impulse Buying Research

The following section will discuss the theoretical contributions to impulse buying research made by this study. Firstly, this thesis is unique due to its contribution to the knowledge of the situational influences of impulse buying. The BPM matrix provides a systematic method to examine impulse buying behaviour in various consumption situations, as this behaviour is not investigated in different situations simultaneously in the existing literature. The BPM also provides impulse buying research with an integrating model, which identifies the effective external and internal factors of impulse buying and examines the way in which the interactions between these factors affect the behaviour from the pre-purchase to the post-purchase stage. Beatty and Ferrell (1998) argue that a comprehensive model that can integrate the factors of impulse buying behaviour is needed in the existing impulse buying literature, and the BPM has proven to meet this need successfully in this study.

Secondly, this study illustrates impulse buying from the viewpoint of radical behaviourism. Viewing impulse buying from the behavioural perspective has allowed this author to examine impulse buying as an actual behaviour – a behavioural response to certain situations – rather than merely an attitude or intent as seen in previous impulse buying studies, which often use the impulse buying tendency as the dependent variable instead of consumers' actual impulse buying choice. In this study, impulse buying behaviour has been described as a behaviour maintained and strengthened by immediate reinforcements. As discussed in Chapter 2, the behavioural way of illustrating impulse buying provides two valuable points to the understanding of impulse buying: the role of immediate reinforcement and the continuous process of an individual's impulse buying behaviour. The results of this study show that the ways in which consumers anticipate immediate reinforcement for impulse buying can be linked to their impulse buying patterns and impulsivity traits. Impulse buying behaviour can be seen as a continuum formed by behavioural patterns from the most planned buying to impulse buying and to the most addictive buying, as shown in the figure below. Therefore, this study also contributes to the impulse buying literature by revealing the *characteristics of different types of impulse buying behaviour* through

investigating the interactions between individual impulsivity traits, impulse buying tendency and impulse buying choice.

Figure 9: Continuum of Impulse Buying



Finally, this study contributes to the existing impulse buying literature by providing more evidence of cultural and sex differences. In this study, impulse buying behaviour has been examined at both micro (individual) and macro (group) levels, providing several findings that complement the existing impulse buying research. Each contribution and the corresponding findings are introduced below.

5-1-1 Situational influences

The first theoretical contribution of this study is the provision of empirical evidence of the consumer impulse buying choice in different consumption situations. More specifically, the BPM matrix has provided a theoretical and systematic method to investigate impulse buying behaviour in various consumption situations. One knowledge gap in the impulse buying literature is that this behaviour has not been compared and investigated in different situations simultaneously, even though researchers agree that situational influences are critical to impulse buying behaviour (Rook & Fisher, 1995; Beatty & Ferrell, 1998; Vohs & Faber, 2007). One reason may be that there were no sufficient models to map out all the types of consumer situations. Researchers could thus only discuss a few chosen situational factors to address the situational influences of impulse buying behaviour (see: Beatty & Ferrell, 1998; Youn & Faber, 2000; Vohs & Faber, 2007). This study has not only investigated impulse buying behaviour from routine shopping to luxury shopping situations; the influences

of closed or open settings on situations were also examined. All the points above make a contribution to the existing knowledge gap in the impulse buying literature.

This thesis thus makes a contribution to the knowledge of situational influences of impulse buying by examining this behaviour within the BPM matrix, which helps to list eight types of impulse buying situations. While all the BPM variables were found to be related to impulse buying, these findings further show that the strength of each variable related to impulse buying behaviour varies in different consumptions situations. Moreover, the findings reveal that different situations also lead to distinct impulse buying rates. This suggests that the impulse buying tendency, although it is a good indicator of impulse buying behaviour overall, does not necessarily have a consistent effect on impulse buying behaviour across all situations, as former researchers assumed.

The situation that has the highest impulse buying rate: routine shopping

This thesis found that situation CC7, routine shopping in the supermarket, is the situation that prompts impulse buying behaviour most often. This finding is consistent with the previous impulse buying literature. Kollat and Willet (1967) state that more than half of the items purchased in the supermarket can be seen as impulse purchases. Since then, numerous impulse studies have been conducted regarding supermarket shopping (Han et al, 1991). Even so, this thesis contributes to this topic with its alternative explanations for the cause of impulse buying during routine shopping.

Most previous research on this topic has focused on in-store physical factors to explain this type of impulse buying, such as promotional posters, an item's shelf location (Abratt & Goodey, 1990; Zhou & Wang, 2004; Peck & Childers, 2006) or an individual's impulse buying tendency (Mai et al, 2003; Zhou & Wang, 2004; Peck & Childers, 2006). These explanations, however, are not supported by the findings of this study. The behavioural setting factors of the BPM, such as physical factors, were surprisingly found not to be related to the impulse buying choice in this situation. In this study, the impulse buying in situation CC7 can be explained better by *utilitarian*

reinforcement. Utilitarian reinforcements, such as “item on sale” and “I like it”, were found to be the most important reinforcements in this situation, which may imply that product attributes such as “cheap” or “product preference” are the main drivers of impulse buying in this situation.

Low-cost products have long been considered as impulse products (Stern, 1962; Rook, 1987). Stern (1962) argues that the types of products more likely to be bought on impulse are often low in price or small in size. Notably, Stern’s argument focuses on the accessibility of products that may prompt impulse buying behaviour (or unplanned buying behaviour). Thus, impulse buying behaviour in such a situation is usually regarded as relatively low cost (Peck & Childers, 2006). In the previous literature, the cost of impulse buying has often been described as the pulling-back power of impulse buying behaviour (Hoch & Loewenstein, 1991; Puri, 1996; Shiv & Fedorikhin, 1997; Vohs & Faber, 2007).

Taking the “time-inconsistent preference” proposed by Hoch and Loewenstein (1991) as an example, it is suggested that consumers often regret their own impulse buying behaviour when they realize that the cost of the buying could have alternatively contributed to a later but more beneficial outcome. The cost of purchasing can thus be seen as a possible punishment for impulse buying behaviour. However, impulse buying behaviour often occurs because consumers’ preference is more likely to be set on the immediate purchase, rather than the delayed consequences. In this situation, the cost of impulse buying as the consequence is not only delayed, but may also be at its minimum compared with other consumption situations. In other words, the possible punishment for impulse buying in this situation is not as influential as in others. Therefore, this behaviour is more likely to be maintained by reinforcements, and thus is more likely to be repeated by consumers.

In this study, what prompts impulse buying behaviour in the routine shopping situation is also the utilitarian reinforcement of “I like it”, which suggests individuals’ past experience and learning history of the product. Consumers tend to buy a specific type

of product on impulse (Jones et al, 2003) and product preference could lead to a higher impulse buying tendency regarding such products (Park et al, 2006). For example, retailers always have gum and chocolate bars in front of the check-out so that consumers might grab them at the last minute of the shopping trip. However, even though these products have high accessibility, a low price and a small size, if a consumer does not have a positive learning history regarding these products (in other words, these products cannot signal utilitarian reinforcements for this consumer), impulse buying behaviour is unlikely to happen. Interestingly, previous studies often link a product preference that leads to impulse buying behaviour to the self-image type of products (Han et al, 1991; Dittmar & Drury, 2000; Phau & Lo, 2004; Park et al, 2006). This study proves that utilitarian reinforcements can also be signalled by products in the routine shopping context.

This study also found that individual impulsivity cannot predict the consumer impulse buying choice in the routine shopping situation. As most respondents have made an impulse choice in this situation, it can be concluded that impulse buying behaviour in this situation is so common for consumers that it requires less input from impulsivity traits. Scholars state that routine and habitual shopping should be separated from impulse buying, because impulse buying should be more “exciting” for consumers (Rook & Fisher, 1995). However, this study shows that impulse buying can be developed as a habitual shopping pattern (Bayley & Noncarrow, 1998).

That may explain why the IB tendency, which represents a consumer’s own impulse buying pattern and experience, has been found to be related to the impulse buying choice in the situation of routine shopping. However, this study also shows that when other factors, such as individual cultural backgrounds, are taken into account, the impulse buying tendency cannot predict the impulse buying choice, as the previous literature suggests. We may interpret the results in this way: since the results reveal that the majority of consumers (94%) would buy on impulse in this situation, the individual impulse buying tendency may be better used to indicate the *non-impulse buyers* in this situation. People who have a very low impulse buying tendency are those who would

not buy on impulse in this situation, even when most other consumers would.

This suggests that if a consumer is a fixed planned buyer, than there is no situational influence on him/her to buy on impulse in a routine shopping setting. For impulse buyers, even though the type of shopping trip is routine/habitual, an impulse buying choice may still be made when consumers are confronted by stimuli (Rook, 1987). Especially from the behavioural view, it is the nature of the behavioural response that defines whether a purchase is an impulse buy or not, rather than the type of shopping trip. Recalling the discussions in Chapters 1 and 2, the way in which an impulse buying choice is defined is *the behavioural response to immediate reinforcements*. Therefore, this study presents a different point of view from Rook and Fisher (1995), who argue that routine shopping does not count as impulse buying behaviour by emphasizing that impulse buying behaviour in this situation is shaped by contingencies, such as the effect of utilitarian reinforcements.

The situation that has the lowest impulse buying rate: accumulation behaviour

To the author's knowledge, this study is the first study to examine the impulse buying choice in accumulation situations. Among all the tested situations, situation 6, credit card point rewards, was found to be the situation with the lowest impulse buying rate. The results also show that none of the BPM components is related to the impulse buying choice in this situation. Therefore, it can be concluded that *impulse buying behaviour cannot be predicted by the BPM in situation 6, which represents a closed setting of accumulative behaviour*.

This may be because the nature of accumulative behaviour is different from the nature of impulse buying behaviour. Accumulation consumption in the BPM includes collecting, saving and instalments, which imply short-term and more immediate punishment accompanied by delayed reinforcement (e.g. a delay in obtaining the desired item). With impulse buying behaviour, however, the desired item is acquired immediately by the consumer and the punishment is delayed (Rook, 1987; Hoch & Loewenstein, 1991). This indicates that impulse buying behaviour is driven by

immediate reinforcement and possibly followed by delayed but more severe punishments. On the other hand, this study shows that the impulse buying choice can still occur in this situation, and *utilitarian reinforcements* are more likely to lead to the impulse buying choice than informational reinforcements.

Notably, the impulse buying rate is found to be higher in accumulation consumption in an open setting: situation 5 relating to a private collection. Accumulation consumption can also include saving money for a desired item. Situation 5 exhibits that an impulse buying choice is more likely to be made when in the presence of the desired item. The impulsiveness in situation 5 is thus represented by the immediate purchase of the item despite the lack of budget. The results show that both utilitarian and informational reinforcements, such as “what I’ve been looking for” and “buying this makes me happy”, encourage impulse buying behaviour in this situation. However, impulse buying behaviour is generally less likely to occur in accumulation situations overall.

Other situations: Pleasure and accomplishment situations

This study provides evidence that impulse buying behaviour in pleasure situations can be predicted by individual cultural backgrounds, behavioural setting factors and the impulse buying tendency. Especially, while the existing literature claims that the impulse buying tendency can indicate individual impulse buying behaviour across situations (Rook & Fisher, 1995; Beatty & Ferrell, 1998; Jones et al, 2003), this study further discovered that the impulse buying tendency has a stronger predictive power on an individual’s impulse buying choice, especially in pleasure consumption situations, such as a shopping trip to a mall.

As for accomplishment situations, this study found that the impulse buying tendency cannot reliably predict impulse buying behaviour. The impulse buying tendency was still found to be related to the impulse buying choice in accomplishment situations, and it is a better indicator of the consumer impulse buying choice than UPPS. However, when other variables were taken into account in the model, the impulse buying tendency could not significantly indicate the impulse buying choice. For instance, the

better predictors in the CC2 high-end dining situation were premeditation, physical factors and individual cultural differences, rather than the impulse buying tendency. Based on these findings, this study argues that subsequent researchers should be cautious when using the impulse buying tendency scale to examine impulse buying behaviour in accomplishment consumption situations. When the impulse buying tendency is used alone to test impulse buying behaviour in this type of situation, it could be shown to be positively related. However, the impulse buying choice would not solely result from the impulse buying tendency. Therefore, interpreting accurately the interactions between impulse buying tendency and other factors in a study would require further consideration.

Closed and open settings

This study also provides empirical evidence of how open- or closed-setting situations can influence the consumer impulse buying choice. *Open* settings were found to be more effective in triggering impulse buying behaviour than closed settings in the maintenance, accumulation and hedonic situations. It is only the *accomplishment* situation in a closed setting (high-end dining) that was proved to have a higher impulse buying rate than the open setting of luxury shopping. The previous research on the BPM has confirmed that the levels of dominance and approach in the PAD framework are higher in open settings than in closed settings (Foxall & Greenley, 1999; Foxall & Yani-de-Soriano, 2005). In the impulse buying literature, dominance and pleasure have been found to be positively related to impulse buying intent (Adelaar et al, 2003). This may be linked to the finding in this study that open settings are more likely to trigger impulse buying behaviour.

For the accomplishment behaviour, there may be several reasons why more impulse buying choices were made in the closed setting than in the open setting. Firstly, it may be a function of the design of the situations in this study. Perhaps more consumers are able to accept paying for a dessert or an additional drink in a very high-end restaurant than paying for luxury brand shopping. Secondly, more impulse buyers in the high-end dining situation were found to be Taiwanese. This may suggest that the reason why

more impulse buying behaviours are found in this situation is related to cultural background. Dining as a group is an important part of Chinese culture, as it is a reflection of “harmony” (Hoare & Butcher, 2008). Taiwanese consumers would thus be under the control of stronger social influences in the dining situation than British consumers.

As introduced in Chapter 2, the main difference between the closed and the open settings described by the BPM is that marketers have more control over consumer behaviour in a closed setting (Foxall, 1992; Foxall, 1997). Correspondingly, the findings of this study show that the behavioural setting variables have greater influences on consumer impulse buying behaviour in the closed-setting situations. For instance, hedonism behaviour in an open setting was illustrated by a “day shopping trip” in this study, while hedonism behaviour in a closed setting was presented as an “inescapable shopping trip”, such as accompanying someone to the mall. This study found that even though these two types of situations can occur in a similar environment (e.g. in a shopping mall), the ways in which behavioural setting factors can influence impulse buying behaviour differ in these two situations. In the open setting, hedonism impulse buying was found to be correlated with the physical factors of the behavioural setting. On the other hand, *all* the behavioural setting factors were found to correlate positively with hedonism impulse buying behaviour in a closed setting. Similar results were also found with accomplishment behaviour: while only physical factors were related to luxury shopping in an open setting, temporal, social and physical factors were found to be influential on high-end dining in the closed setting. As behavioural setting factors can often be controlled and manipulated by marketers (e.g. atmosphere, sales, etc.), these findings show that impulse buying behaviour in a closed setting is subject to a greater level of control by marketers, as the BPM describes.

Situational influence on the consumer behavioural setting

This study also found that the ways in which the BPM components affect the impulse buying choice vary based on different situations, which further highlights the importance of the situational influence on impulse buying behaviour. For example, the

previous section has discussed the finding that behavioural setting variables have greater effects on consumer impulse buying behaviour in closed-setting situations. The impulse buying behaviour in three situations was found to be unrelated to any of the behavioural setting factors in this study; these situations are routine shopping and both accumulation situations (private collection and credit card reward points). To conclude, consumer behavioural setting factors appear to be ineffective in controlling the impulse buying choice in the situations in which impulse buying behaviour is very frequent or very rare.

The findings concerning the consumer behavioural setting also indicate that impulse buying behaviour is a joint result of both external and internal factors (Youn & Faber, 2000), in the same way that the BPM predicts that consumer behaviour is located at the intersection of a behavioural setting and an individual's learning history (Foxall, 1990). For instance, the previous findings of the situation of routine shopping show that if the impulse buying behaviour of an individual has already been developed as a regular or even habitual shopping pattern, the factors of the behavioural setting will not have much influence on the impulse buying choice of this individual.

The table below summarizes the findings regarding the impulse buying choices in each situation and the corresponding effective variables, and illustrates that the impulse buying choice in each situation is a combined effect of different behavioural setting variables and individual learning history variables. Taking the pleasure situations as an example, the impulsive buying choice in situation CC3 of a day shopping trip may be a joint result based on physical factors and an individual lack of premeditation and urgency scores. On the other hand, in situation CC4, all the factors of the behavioural setting and urgency may have an effect on the impulse buying choice.

Table 21: Impulse Buying Choice in Each Situation and Corresponding Variables

Situation	Setting	UPPS	IB tendency	Culture
S1	Physical	Urgency	Y	Y (<i>British</i>)
S2	Temporal/social/ physical	(Lack of) premeditation	Y	Y (<i>Taiwanese</i>)
S3	Physical	(Lack of) premeditation/urgency	Y	Y (<i>British</i>)
S4	All factors	Urgency	Y	Y (<i>Taiwanese</i>)
S5	n/a	Sensation seeking	Y	Y (<i>British</i>)
S6	n/a	n/a	N	N
S7	n/a	n/a	Y	Y (<i>British</i>)
S8	Temporal/social	Premeditation/urgency/sensation seeking	Y	Y (<i>British</i>)

Situational influence on impulsivity and impulse buying choice

Situational influences also appear to have effects on how each facet of UPPS may lead to the impulse buying choice. These findings show that different facets of UPPS correspond to consumer impulse buying choices within specific situations. A distinct example of the ways in which situations can have effects on the impulsivity of impulse buying is represented by the sensation-seeking facet of UPPS. Although the previous literature suggests that impulse buying is a thrilling and exciting experience for consumers (Rook, 1987; Rook & Fisher, 1995; Weun et al, 1998), the findings of this thesis establish that all the other UPPS facets *except* sensation seeking have a positive relationship with the IB tendency.

However, only in situation CC5 (private collection) does sensation seeking correlate positively with the consumer impulse buying choice. This situation signals utilitarian reinforcements such as “this is what I’ve been looking for” and “I like it”; these provide a sound explanation for why sensation seeking has a unique role in this situation. Impulse buying researchers state that it is the product that sometimes creates the thrill in the buying experience (O’Guinn & Faber, 1989; Dittmar & Drury, 2000). This thesis shows that when such a product is presented in a situation, the individual sensation-seeking tendency can be a valid predictor of impulse buying behaviour in such situations. Sensation seeking was also found to correlate with impulse buying choice in another situation: “the bar last call”. In this situation, the informational reinforcement “buying this would make me happy” is the driving force behind the impulse buying choice. It is therefore understandable that sensation seeking can predict

the impulse buying choice in this situation, as consumers sometimes buy on impulse for fun and for the novelty experience (Hausman, 2000).

5-1-2 Impulse buying behaviour as a behavioural pattern

Another contribution provided by this study is the confirmation of the previous argument in the literature that impulse buying behaviour can be a *continuum* of behaviour (Dittmar et al, 1995; Dittmar et al, 1996; Dittmar, 2005; Hofmann et al, 2008). As introduced in Chapter 2, behaviour from the behavioural view can be maintained and strengthened by reinforcements; impulse buying behaviour can thus further develop into the most excessive type of buying behaviour. Therefore, this study also contributes to the impulse buying literature by revealing the characteristics of each type of impulse buying behaviour through investigating the interactions between individual impulsivity traits, impulse buying tendency and impulse buying choice. In summary, this part of the contribution may reveal different types of impulse buyers and the ways in which post-purchase stages can further influence consumer impulse buying behaviour.

The variety of impulse buying behaviour presented by the UPPS facets

In Chapter 2, this thesis presented an argument for why UPPS scales are used in this study. The multi-dimensions of the impulsivity constructs of UPPS are better suited to explaining the various routes to impulse buying behaviour caused by different personality traits reacting to specific cues (Youn & Faber, 2000). As this thesis predicted, the results provide an interesting insight into the ways in which each UPPS facet leads to different types of impulse buying behaviour. Premeditation, urgency and sensation seeking were all found to correlate with impulse buying behaviour in certain ways. Only perseverance has no distinct relationship with impulse buying behaviour. This view also further supports the idea previously argued in Chapter 2, that the impulse buying drive of an individual may be rooted in the individual's personality (Verplanken & Herabadi, 2001), as different personality traits of UPPS represent different types of impulse buying behaviour.

The planned buyer: Premeditation

People who have high premeditation scores may represent the most planned buyers. They often plan their buying before entering a consumption situation and act accordingly. Even in consumption situations that signal high utilitarian reinforcement, such as hedonism and high informational reinforcement such as high-end dining, their premeditation traits still distinguish them from other buyers who are more likely to buy on impulse in these situations. In other words, they rarely make impulsive choices and are less influenced by social or utilitarian factors, and retailing settings also have a lesser effect on them than on other consumers. Their premeditation traits also show through their buying experiences and patterns, as they generally have a lower impulse buying tendency. Furthermore, their self-reported attitude towards impulse buying is consistent with their impulse buying behaviour: they do not like it and often do not engage in this behaviour.

The fun buyer: Sensation seeking

The previous literature often points out that impulse buying can be an exciting experience (Weinberg & Gottwalds, 1982; Rook, 1987; Rook & Fisher, 1995; Hausman, 2000). People who have higher sensation-seeking scores might describe this facet of impulse buying and be classified as the “fun buyers”. This type of impulse buying experience can be described as experiences during which consumers feel arousal and are more likely to buy on impulse (Rook & Fisher, 1995; Adelaar et al, 2003; Mattila & Wirtz, 2008; Silvera et al, 2008; Sharma et al, 2010). They enjoy impulse buying, but do not necessarily often buy impulsively. Since they do not always buy on impulse, the occasions on which their impulse buying behaviours occur depend on situation influences. Which kind of situation gives the consumers excitement and arousal? Previous impulse buying scholars provide two likely explanations. Firstly, appropriate atmospherics can create the arousal of consumers (Beatty & Ferrell, 1998). Corresponding to this view, the finding of this thesis is also that the consumer behavioural setting may have effects on this type of impulse buyer. Secondly, the arousal may result from product involvement (Jones et al, 2003; Park et al, 2006). This particular effect on sensation-seeking consumers was also noted in this study within

the situation of private collection. Utilitarian reinforcements such as “I like it” or “this is what I’ve been looking for” were strong triggers of impulse buying behaviour in this situation, which is also closely related to sensation seeking. This may correspond to the previous literature concerning product involvement and impulse buying behaviour, as the product itself may serve as a stimulus that creates arousal during the buying experience and increases the probability of impulse buying behaviour.

In summary, this type of impulse buyer pursues emotional arousal, and may impulse buy for fun. This thesis has found that the most influential reinforcement for this type of consumer is the informational reinforcement “buying it would make me happy”. This may also explain why these consumers report that they enjoy impulse buying behaviour more than other types of consumers, even they do occasionally regret it. Finally, this thesis has found that men are more likely to be sensation-seeking impulse buyers. Not only were men found to be more sensation seeking than women, but the relationship between impulse buying behaviour and the sensation-seeking trait was also found to be much stronger in men than in women. Therefore, this finding can provide some practical perspectives for marketers, especially regarding products that target male consumers. For example, a very stimulating environment may help to increase the rate of impulse buying behaviour (Mattila & Wirtz, 2008).

The potential problematic impulse buyer: Urgency

Individual *urgency* scores were found to be the strongest indicators of impulse buying behaviour in this study. The findings of this thesis show that individual urgency is positively correlated with the individual IB tendency and the total impulse buying choice in the BPM matrix situations (CCIB). This implies that individuals who have a high urgency trait often engage in impulse buying behaviour. They are more likely to buy in various consumption situations, as this thesis found that urgency has an effect on the impulse buying choice in more situations than other facets of UPPS.

As discussed in Chapter 2, urgency is often found to be a strong indicator of several *problematic or additive behaviours*, including tobacco craving (Billieux et al, 2007),

excessive use of mobile phones (Billieux et al, 2008b), substance dependence (Verdejo-Garcia et al, 2007), compulsive buying (Billieux et al, 2008a), self-injury (Glenn & Klonsky, 2010) and other maladaptive behaviours (D’Anestis et al, 2007). Instead of stating that impulse buyers have higher urgency, it is therefore more accurate to say that people with high urgency traits are more likely to engage in addictive behaviour, *including* impulse buying behaviour. For those people, these types of behaviour often function as a “way out” of a negative state.

For example, impulse buying has been reported to offer relief from negative moods for consumers (Rook & Gardner, 1993; Elliot, 1994). Youn and Faber (2000) also find that consumers with a higher stress-reactive tendency are more likely to impulse buy in order to escape from negative emotional states by receiving immediate gratification. Sneath et al (2009) report that impulse buying behaviour was a way for depressed people to cope with their losses and emotional trauma after Hurricane Katrina. These previous studies may illustrate the “negative effect” of urgency and its possible effects on impulse buying behaviour. The results of this study also show that individuals who report that they always regret impulse buying but they are unable to stop are people with a higher urgency tendency.

To conclude, the findings imply that impulse buying behaviour may become a *problematic behavioural pattern* if individuals have a high *urgency* tendency, and frequent impulse buyers may be likely to engage in other potential problematic behaviours (Baumeister, 2002; Verplanken et al, 2005). It is fair to say that such personality traits may shape an individual’s behavioural pattern. This thesis thus argues that urgency is a strong indicator that may differentiate potential problematic impulse buyers from other consumers.

The post-purchase stage of impulse buying

The investigation of the post-purchase stage of impulse buying behaviour is another contribution offered by this thesis to the existing literature. Our findings reveal that utilitarian reinforcement has a greater effect on impulse buying behaviour than

informational reinforcement. This appears to be inconsistent with some previous studies, which argue that impulse buying is more likely to occur when products possess symbolic or self-image meaning to the consumers (Dittmar et al, 1996; Dittmar & Drury, 2000; Phau & Lo, 2004).

On the other hand, the idea that product preference is closely linked to impulse buying behaviour is supported by the utilitarian reinforcement found in this thesis. U3, “I like it”, is a significant answer in various situations in this study. This finding further supports the hypothesis provided by former scholars that impulse buying behaviour is strongly related to product involvement (Jones et al, 2003; Park et al, 2006). As mentioned in Chapter 2, for example, consumers who are interested in fashion or engage in more fashion-related activities (such as fashion-major students) are more likely to buy fashion items on impulse (Phau & Lo, 2004; Park et al, 2006; Pentecost & Andrews, 2010). Another important utilitarian reinforcement found in this study is U1, “item on sale”. As discussed in Chapter 2, an item on sale is found to correlate positively with the purchased quantity of that item (Gutpa, 1988), and consumers do gain satisfaction from purchasing a “bargain” (Cox et al, 2005). Previous studies also show that “on sale” is one of the most frequent cues for impulse buying behaviour (Youn & Faber, 2000), and sometimes the gratification of buying a bargain may even make impulse buying a thrilling experience (Rook, 1987; Hausmann, 2000). In summary, this thesis found that U1 and U3 are the most effective utilitarian reinforcements that encourage impulse buying behaviour.

Another post-purchase effect of impulse buying behaviour explored in this study is the way in which consumers report their regret regarding their own impulse buying behaviour. Previous studies frequently find that consumers often regret their previous impulse buying behaviour (Rook, 1987; Rook & Fisher, 1995; Wood, 1998), but the role of this “regret” is rarely discussed in the existing literature. In this thesis, the findings show that the ways in which consumers report post-purchase regret may be used as an indicator of the type of impulse buyer an individual is. In this study, the consumers were asked to evaluate their impulse buying by choosing one of the

following four options: 1) always regret, but can't stop; 2) regret all the time; 3) sometimes regret but enjoy impulse buying; 4) sometimes regret so don't like impulse buying.

The findings suggest that people who chose option 1, "always regret but can't stop", could be potential problematic impulse buyers, as they have a higher urgency tendency and expect higher reinforcement for their own impulse buying choices than other consumers. This type of consumer can be classified as the most impulsive buyers in this study, as they are also found to make more impulse buying choices in the situations in this study. As discussed in Chapter 2, Hoch and Loewenstein (1991) argue that impulse buying is caused by time-inconsistent preference, which can correspond to the finding here. This type of consumer makes more impulse buying choices, because more immediate reinforcements in the situations are anticipated by them. Their past experiences should have signalled them their potential punishments; however, their choice is still towards immediate reinforcements in a consumption situation.

This characteristic is also found among problematic gamblers, who are described as having "rash impulsivity", which refers to the inability to stop approach behaviour in light of potential punishment (Cyders et al, 2008; Loxton et al, 2008). One possible explanation may be that the need to obtain the thrill or other positive emotions is a more crucial driver of their impulsive behaviours (Arnolds & Reynolds, 2003; Xiao & Nicholson, 2012), as a study also finds that people who make such a rash impulsive choice can be under the influence of both extreme positive and negative affect (Cyders et al, 2008).

Moreover, anticipating regret before making an impulse buying choice could even be an emotional trigger for an individual's impulse buying behaviour (Xiao & Nicholson, 2012). The previous literature reports that consumers admit their own impulse buying behaviour as "being bad" (Rook & Hoch, 1985; Rook, 1987). One possible reason why consumers would still engage in impulse buying may be that anticipating regret forms a negative pre-purchase emotional state in consumers. For consumers with high

urgency traits, a negative emotional state might prompt them to buy on impulse as a task to alter such a negative state.

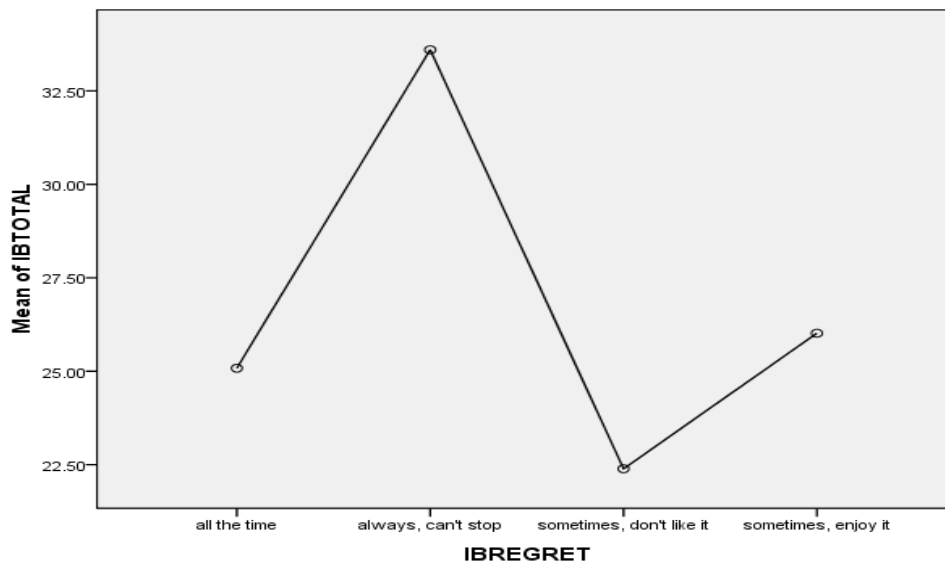
Notably, the people who answered that they regret “all the time” also reported considerably lower reinforcement than other groups. If they already do not expect a great deal of reinforcement before engaging in impulse buying behaviour, why do they still feel regret all the time? One explanation is the difference between the types of people who regret all the time and the types of people who cannot stop. For people who are always regretful, since they do not expect much reinforcement from their impulse buying behaviour, their regret might mostly come from later punishments for the impulse buying behaviour, such as a lack of money.

For the people who stated that they always regret but cannot stop, their regret is more likely to result from perceiving a greater immediate reinforcement at the pre-purchase stage, and so their later punishment could be influenced by this effect (e.g. dissatisfied with the products later; short of money). As argued in Chapter 1, the definition of impulse buying from the economic view, such as the time-inconsistent preference, would thus describe this type of consumer better, as the greater immediate reinforcements lead to the greater and later punishment in the post-purchase stage (Hoch & Loewenstein, 1991; Xiao & Nicholson, 2012).

According to radical behaviourism and the BPM, the consequences following a behavioural response become part of the individual’s learning history, and the findings of this thesis also confirm this effect. The types of post-purchase regret that consumers reported were found to correlate significantly with their IB tendency. As the graph below shows, the respondents who reported “always but can’t stop” have a higher IB tendency than other groups, whilst the respondents who stated that they do not like impulse buying have a lower IB tendency. Rook and Fisher (1995) propose the normative influence on impulse buying behaviour, that consumers’ own evaluation of the appropriateness of impulse buying has a potential effect on their impulse buying behaviour. This may illustrate the difference between people who reported that they

“don’t like it” and people who reported that they enjoy it. The way in which the types of regret can be reflected in the IB tendency (IB experience) may also reveal how the behavioural pattern of impulse buying develops through the cycle of post-purchase consequences shaping the individual learning history.

Graph 5: Impulse Buying Tendency and Self-Reported Regret



The ways in which impulse buying consequences can link back to the individual learning history is also revealed by the findings of UPPS and types of regret. As mentioned before, the respondents who reported that they *always regret but cannot stop* have a higher *urgency* tendency. This also fits the nature of the urgency facet of UPPS, which is described as a tendency for rash action, especially in a negative state, and it often leads to regret (Whiteside & Lynam, 2001; Cyders & Smith, 2007). On the other hand, the respondents who reported that they actually enjoy impulse buying also scored highly on the *sensation-seeking* scale. Indeed, impulse buying can be an experience that incorporates excitement, fun, novelty and surprise (Rook, 1987; Hausman, 2000), and previous researchers also propose that shopping enjoyment is positively related to the impulse buying tendency (Beatty & Ferrell, 1998; Park et al, 2006). This thesis further argues that the *individual enjoyment of impulse buying behaviour may be explained by the individual personality trait*: that is, people who

have a high sensation-seeking tendency are more likely to see their impulse buying experience as a pleasure one.

As regards the people with higher premeditation scores, they can be classified as the most planned buyers: not only do they have a lower impulse buying tendency, they also reported that they do not like impulse buying. In summary, the relationship between individual UPPS scores and post-purchase regret confirms that post-purchase regret of impulse buying can reflect an individual's personality traits, and these findings can further help to *identify different types of impulse buyers*. These findings can support the argument of radical behaviourism and the BPM that such behaviour formation is a *continuous process*: the behavioural outcomes further influence and shape the future behavioural response.

5-1-3 Cultural and sex differences

This study also contributes to the impulse buying literature by providing evidence of cultural and sex differences. In this study, impulse buying behaviour has been examined at both micro (individual) and macro (group) levels, providing several findings that may complement the existing impulse buying literature. Concerning cultural differences, this study supports the previous finding that individualist consumers engage in more impulse buying behaviour than collectivist consumers (Doran, 2002; Kacen & Lee, 2002); moreover, collectivist consumers, such as Taiwanese consumers, are more likely to engage in impulse buying behaviour in closed-setting situations. Regarding sex differences in impulse buying behaviour, this study offers the interesting evidence that men engage in more impulse buying than women in a sensation-seeking situation.

Cultural differences

This research contributes to the existing impulse buying literature by providing cross-cultural data. The results reveal several significant differences between British and Taiwanese consumers. Overall, *British* consumers are more likely to engage in impulse buying in this thesis, as they report a higher IB tendency and make more

impulse buying choices in the BPM situations. This finding is similar to Kacen and Lee's study (2002), which states that consumers from individualist cultural backgrounds have a higher IB tendency. Other studies also show that Caucasian consumers from individualist countries are more likely to engage in impulse buying behaviour than Asian consumers (Doran, 2002; Sun et al, 2004).

The reasons why British consumers have a higher IB tendency and make more impulse buying choices in this study may be explained by the UPPS results. These results show that British respondents in this study have higher urgency and sensation-seeking scores, and they score lower on premeditation tendency. In other words, British respondents can be considered to be more impulsive individuals than their Taiwanese counterparts in this study. Since British consumers have higher sensation-seeking scores, it can be said that impulse buying behaviour is more associated with a fun-seeking experience for British consumers. Meanwhile, it may be easier for British consumers to become problematic impulse buyers due to their higher urgency scores. For example, Zhang and Shrum (2008) find that individualist consumers are more likely to engage in impulsive beer consumption that leads to binge drinking behaviour. As discussed in Chapter 2, extraversion, which is a personality trait that positively correlates with the impulse buying tendency (Verplanken & Herabadi, 2001; Silvera et al, 2008), is more commonly found in individualist cultures. Since extraversion refers to a tendency to experience positive emotion (Furnham et al, 2003), it can be linked to the findings of this thesis: that is, sensation seeking is more related to British consumers' impulse buying behaviour, and British consumers treat impulse buying as a fun-seeking experience more than Taiwanese consumers.

On the other hand, there are two distinct characteristics of Taiwanese consumers' impulse buying behaviour. Firstly, behavioural setting factors have more control over their impulse buying behaviour. For international marketers, designing and arranging an appropriate behavioural setting, such as *window displays* and *store atmosphere*, may be effective in encouraging *Taiwanese* consumers' impulse buying behaviour. Secondly, the impulse buying behaviour of Taiwanese consumers is more greatly controlled by

social influences. This finding is consistent with the previous findings that the impulse buying behaviour of collectivist consumers is more correlated with social influence (Lee & Kacen, 2008). As previous scholars argue, it is not that collectivist consumers do not have the inclination for impulse buying; rather, they may have learned to suppress this behaviour (Zhang & Shrum, 2008) due to social pressure.

The argument that the impulse buying choices of Taiwanese consumers are under the control of social influences can be supported by the findings of the BPM matrix in this study. Out of eight situations, our results show that Taiwanese consumers made more impulse buying choices than British consumers in only two situations. They are the hedonism situation of an inescapable shopping trip and the accomplishment situation of high-end dining. These are both *closed-setting* situations, in which consumers are under greater pressure from physical, social and verbal factors to conform to a particular pattern of behaviour (Foxall, 1999).

The fact that more Taiwanese consumers engage in impulse buying in these two situations suggests that the presence of peers is an important factor acting upon Taiwanese consumers' impulse buying. A study conducted with Mainland Chinese consumers also suggests that peer influence is important for Chinese consumers' impulse buying (Yu & Bastin, 2010). This implication may extend to the concept of word of mouth: some previous studies show that collectivist consumers, such as Chinese or Japanese consumers, use a greater number of word-of-mouth resources for the information search about their purchases than individualist consumers (Money, 2004; Fong & Burton, 2008).

Sex differences

In order to examine impulse buying behaviour at both the individual and the group level, this study asked each respondent to report his or her biological sex and gender roles measured by BSRI. This study may thus offer evidence on the differences in impulse buying behaviour between men and women, and between masculinity and femininity. The results show that biological sex is a better group category than gender

role for the investigation of impulse buying behaviour, as no major difference was detected between gender roles. However, several distinct differences were found between men and women.

Sex differences appear to influence all the other BPM components, including the behavioural setting, learning history, impulse buying choice and reinforcement of impulse buying behaviour. Several findings in this thesis are consistent with the previous literature. Behavioural setting variables, especially physical factors, have a greater effect on women than on men. This finding is supported by the previous evidence that women are more sensitive to details in the environment and to non-verbal cues (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Sternthal, 1991). Women in this study scored higher than men on the urgency tendency, while men scored higher on sensation seeking. This result is also consistent with several previous UPPS studies (e.g. Billieux et al, 2008a; Whiteside & Donald, 2009).

Furthermore, this result may be linked to the sex differences found for the IB tendency as well. Since the IB tendency and impulse buying choices in this study are more greatly correlated with urgency, women in this study were also found to have a higher IB tendency and to make more impulse buying choices in the BPM matrix situations. Several previous studies also find that women buy on impulse more frequently than men and have a higher IB tendency (Wood, 1998; Dittmar, 2005). Sex differences have also been found regarding reinforcement. This study found that even when in the same situation (this significance was found in situation 2, a day shopping trip), men and women receive signals from different types of reinforcement. Information reinforcements have a greater effect on women in this situation. Former scholars also show that women emphasize the emotional dimension of impulse buying more than men do (Dittmar & Beattie, 1995; Dittmar, 2001). This may be because men tend to buy utilitarian types of items, while women tend to buy items with more inter-personal meaning (Rook & Hoch, 1985; Dittmar & Beattie, 1995).

Men and women also differ in the types of situation in which they would make the impulse buying choice. Our results show that the only situation in which men make more impulse buying choices than women is situation CC8: the bar last call. This may be explained by sensation seeking, which is positively correlated with this situation, and on which facet men score higher than women. Therefore, while women seem to be more frequent impulse buyers overall (Dittmar et al, 1996; Wood, 1998), there are some situations in which men are more likely to engage in impulse buying behaviour than women. To conclude, this study also provides interesting findings regarding the sex differences in impulse buying behaviour, which may provide a useful focus for future research.

5-2 Theoretical Contributions to Radical Behaviourism and the BPM

Radical behaviourism and the BPM have been applied to the investigation of other consumer behaviour, including innovation (Foxall, 1994); brand choice (Oliveira-Castro et al, 2010; Oliveira-Castro et al, 2011), price responsiveness (Oliveira-Castro et al, 2008), participation in loyalty programmes (Frisou & Yildiz, 2011) and salesperson–customer interaction (Simintras & Cadogan, 1996). This study further expands the interpretation of radical behaviourism to impulse buying research, which provides the impulse buying literature with a fresh view. This research also proves the legitimacy of the BPM for use in impulse buying research, as it can be used as a theoretical model to predict the consumer impulse buying choice in various situations.

Moreover, this study reveals several issues concerning the application of the BPM to impulse buying behaviour. For instance, the findings of this thesis show that the *level of reinforcement* in the BPM matrix is *not always consistent* with the original prediction in the case of impulse buying behaviour. For example, the informational reinforcement of accumulation should be relatively high; however, more evidence of utilitarian reinforcement was found in accumulation situations in this study.

The results of this study are inconsistent with the prediction of temporal discounting in the BPM matrix originally made by Foxall (2010), which states that temporal discounting is unlikely to happen in maintenance situations since the reinforcement is relatively low. On the contrary, this study finds that routine shopping is the situation with the highest impulse buying rate, owing to the utilitarian reinforcement. This may suggest that, when applying the BPM to consumer behaviour, the ways in which utilitarian reinforcement and informational reinforcement are defined for consumers should be treated with caution. Nevertheless, the application of the BPM in this study shows that it is a practical model to use, especially for the investigation of situational influences on consumer behaviour.

Furthermore, this study provides the BPM research with evidence that an individual's sex and cultural backgrounds can be effective antecedent variables for examining consumer behaviour. The cultural background was included as individual learning history in this study, and shows that British and Taiwanese consumers have different impulse buying patterns and that cultural backgrounds may even predict the impulse buying choice in some situations. Although individual biological sex is not included in the study proposition, this study finds that there are distinct differences between men's and women's impulse buying behaviour in all the BPM components, including behavioural setting, learning history and reinforcement. Therefore, this study finds that sex may be an effective variable within the BPM for investigating consumer behaviour.

5-3 Managerial Implications

The first managerial implication provided by this thesis can be derived from the findings regarding the consumer behavioural setting and consumption situations. All the behavioural setting factors were found to be positively associated with the IB tendency, especially the physical factors. The effects of physical factors are distinctly found in the situations of pleasure and accomplishment. Physical factors such as "window display" would be effective for signalling impulse buying in these situations.

Especially for accomplishment situations such as luxury shopping, the physical factors of “store atmosphere and decor” would also be effective for potential impulse buyers. In such a situation, physical factors should signal not only utilitarian but also informational reinforcements, such as the “fit the taste” report by impulse respondents in the situation of luxury shopping in this study. For accumulation and maintenance situations, the displays that signal utilitarian reinforcement are effective, as the utilitarian reinforcements of “on sale”, “useful” and “I like it” were frequently reported by the impulse buyers in these situations. These findings can be useful for marketers who aim to create appropriate settings to encourage impulse buying behaviour.

As this study has explored the cultural differences in impulse buying behaviour, a managerial implication may also be provided to international marketers. For individualist consumers, such as British consumers, impulse buying behaviour has been shown to be a common shopping pattern in the routine shopping situation. Since impulse buying behaviour can be effectively triggered by the signal of utilitarian reinforcement, it is more important for retailers in the UK to create a setting that signals utilitarian reinforcement.

Providing services within a closed setting would be a good opportunity to tempt collectivist consumers, such as Taiwanese consumers, to buy on impulse. Creating appropriate physical and social factors in the setting would be effective for encouraging impulse buying behaviour. Especially for the restaurant setting, Taiwanese consumers appear to be more influenced by the setting factors, such as atmosphere. This effect was also found in the pleasure consumption situation in a closed setting, such as an inescapable shopping trip to the mall. Another example of a pleasure situation in a closed setting of the BPM matrix is in-flight duty free shopping (Foxall & Greenley, 1999; Foxall & Yani-de-Soriano, 2005). A study also suggests that the in-flight purchases of Taiwanese consumers often result from impulse buying behaviour (Huang & Kuai, 2006). Hence, creating a closed setting that is controlled by physical and social factors would be an effective way to encourage the impulse buying behaviour of Taiwanese consumers.

Another managerial implication that this study suggests to marketers is derived from the findings regarding sex differences. Women are under more influence from the behavioural setting than men and are more likely to impulse buy under the “negative effect”. Therefore, marketers who aim to provide services to female customers may use these concepts to create retail settings and develop marketing communication messages. For instance, the department store Selfridges constantly displays posters in-store during the sales season, with messages such as “Buy me, I’ll change your life” or “So many beautiful things, so little time”. These marketing communication strategies may be more effective with women and their impulse buying behaviour than with men. For men, creating a setting that can match their sensation-seeking characteristics would be a good way to encourage impulse buying. Research shows that men are more likely to buy leisure-related products on impulse (Dittar et al, 1996; Dittmar & Drury, 2000). Therefore, the marketers of these products could design a more exciting setting in which to present these services or products. For instance, some of the Nike stores have basketball-shooting facilities to entertain customers, and these could make male consumers have fun experiences in-store and could potentially lead to impulse buying behaviour.

Finally, this study also offers managerial implications for policy makers and consumers. It is beneficial for consumers to understand that their own impulse buying behaviour can be predicted and controlled by contingencies. This study shows that consumers with a higher urgency tendency are more likely to become problematic impulse buyers, especially those who report that they regret impulse buying all the time but cannot stop their own impulse buying behaviour. As this type of consumer often overestimates the reinforcement of his or her own impulse buying, it is possible that his or her behaviour can be modified if there are other variables that can signal more punishments for impulse buying behaviour. For instance, having a shopping companion to remind an impulse buyer of the possible negative outcomes of the purchase could be useful. Luo (2005) finds that shopping with family members could decrease the impulse buying tendency in comparison with shopping with peers, and the reason could be that family members’ verbal behaviour signals less reinforcement for the purchase. They could be

more “sensible” about weighting the pros and cons of the purchase, while friends are more likely to encourage impulse buying behaviour to create a fun experience.

5-4 Research Limitations and Implications for Future Research

While this thesis contributes to the existing impulse buying literature in the ways described above, several research limitations need to be considered. Ray (1997) states that three of the most important limitations of psychology research are 1) the tools we have available; 2) the researcher’s shared view of the world; and 3) the psychological limitations. In reference to Ray’s first point, limitations may be caused by the research methods used. The main research method in this study is a self-report questionnaire, which means that personal bias might be present in the respondents’ answers.

Another limitation regarding the tools used and personal bias in this thesis is that the impulse buying choice was examined in the consumption situations designed by the researcher, rather than actual consumption situations on the spot. Although the previous BPM literature provides a theoretical base for the design of situations in this study (Foxall & Greenley, 1999; Foxall & Yani-de-Soriano, 2005), when the respondents read the designed situations, it is possible that they incorporated their own personal experiences that were unknown to the researchers. For instance, situation 3, the bar last call, was designed based on mandatory consumption with emphasis on the consumption rules, respondents’ personal preferences and experience of the product (such as alcoholic drinks) and the situation might have an effect on their impulse buying choice in this situation. Finally, in reference to the third point made by Ray (1997), which is the psychological limitation, as the previous literature suggests that a consumer’s emotional state or other situational influence might have an effect on his or her impulse buying choice (Beatty & Ferrall, 1998; Vohs & Faber, 2007), it is expected that respondents’ emotional states while completing the questionnaire might possibly have an effect on their responses.

Several limitations concerning data collection may also be noted. This study used convenience sampling, as it is the most efficient and economical way of collecting data

within a limited time frame. This study has made several efforts to improve the quality of the convenience sample. For instance, British consumers were randomly selected by the researcher on several train journeys across the UK, and Taiwanese consumers were approached with snowball sampling via emails and online social websites. Although this way of collecting data could reflect the bias of the researcher and the volunteer respondents, the sample of this study is not limited to a population within a geographical area. Moreover, this study has made efforts to improve the quality of this convenience sample through collecting data from consumers across various age groups. Compared with other studies that solely use students as the convenience sample, this study could thus more closely represent the total population in the UK and in Taiwan.

Another limitation of this research is that the UK and Taiwan samples were not identical in terms of age profile, as the participants, who are between eighteen and twenty-five and over fifty, were relatively under-represented in the Taiwan sample due to the non-probability sampling used in this research. Researchers also admit that probability sampling, while it is more appropriate to ensure a controlled demographic profile, is uncommon in cross-cultural marketing research, as the accessibility of a certain population may vary in different cultural settings (Malhotra et al, 1996). Also, it is argued that, although non-probability sampling, such as the present study, limits generalizability, random sampling would make it difficult for researchers to conclude whether the differences/similarities found between participants can be explained by cultural or by demographic variables (Salciuviene et al, 2005). Nevertheless, future research is recommended to target a specific age group in different countries in order to provide further cross-cultural comparison in impulse buying behaviour. For example, Kacen and Lee (2002) used mostly student samples to compare cross-cultural impulse buying behaviour. However, although this present study has a weakness regarding the age profile in the sample, the finding of this study that individualist consumers are more impulsive in comparison to collectivist consumers does correspond to the result in the previous study (Kacen and Lee, 2002). While this study has extended this finding to the non-student sample, future research could further examine if such a result could also be found in other age groups, for example the over fifties.

Finally, this study does not take individuals' income level into consideration. The reason is that this study aims to explore the impulse buying behaviour of all types of consumers, in order to detect impulse buying as a behavioural response of general consumers. However, individuals' income might affect the ways in which they make an impulse buying choice in the situations of this study. For example, this study detects a low impulse buying rate in the accomplishment situation of luxury shopping, and this could be because luxury shopping is not a situation that normal consumers would encounter. This might affect the ways in which respondents indicate their impulse buying choice in this situation, as they might have fewer or no personal experiences of luxury shopping.

The results of this thesis offer several topics for future research. Firstly, this study examines the individual impulse buying choice in designed situations via a questionnaire. It would be interesting actually to examine the impulse buying behaviour in various situations in a real-world context. More qualitative research methods, such as single-object observation or shopping diaries, may further validate or confirm the findings of this thesis. Secondly, this thesis contributes to the cross-cultural impulse buying research by providing data on both British and Taiwanese consumers. Since the results of this study confirm that the cultural background is a strong indicator of impulse buying behaviour and the BPM, further research can be undertaken with samples from wider cultural backgrounds, in order to determine whether the differences found in this study can also be applied to other individualist and collectivist countries.

Moreover, besides nationality indicating individualist or collectivist, the cultural background contains other types of classifications, such as religion. Thirdly, this study finds several differences in impulse buying between men and women. Interestingly, it appears that the findings of this study are closely linked to biological sex differences as in the psychology literature, such as the findings that men have higher sensation-seeking scores (Buss, 1991; Zuckerman, 2003) and that women are more influenced by behavioural setting factors (Baren-Cohen, 2003). It may therefore be

worth exploring whether these differences in impulse buying behaviour between men and women are the results of biological or social factors.

Conclusion

To conclude, impulse buying behaviour is an important topic, especially today. While marketers are eager to seek a solution to falling sales, consumers are also hoping to balance their shopping behaviour and their budget. This study has examined impulse buying behaviour using a new approach: that of radical behaviourism and the BPM. In this way, the research hopes to contribute to both theoretical and practical issues concerning impulse buying behaviour. This chapter provides such findings and discussions of the study, and a consideration of the research limitations. This study contributes to the knowledge of situational influences on impulse buying behaviour and identifies different types of impulse buying behavioural patterns. The situation that triggers the most impulse buying behaviour is the routine shopping situation, and behavioural setting factors appear to have more control over consumer impulse buying choice in closed settings, such as high-end dining. On the other hand, individuals with higher levels of impulse buying tendency and urgency should be cautious, as they are vulnerable to progression of the behaviour that may end in excessive buying. These findings concerning situational influences not only offer practical and effective solutions for marketers to enhance consumer impulse buying behaviour; the identification of various patterns of impulse buying behaviour may also have implications for behaviour modification for consumers who wish to control their own impulse buying behaviour.

To conclude, this study provides empirical evidence of impulse buying as viewed through the lens of radical behaviourism and the BPM. Impulse buying behaviour can be predicted by external behavioural setting factors, consumer past experience, such as impulse buying tendency, and individual impulsivity traits. Furthermore, this thesis opens the door to several interesting but practical topics for future impulse buying research, including the differences between cultural backgrounds and sex, and hopes to serve as a milestone in the impulse buying literature.

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Appendix 1: Final Questionnaire

This questionnaire will only be used for academic purpose and all the data will be confidential. This study is about impulse buying behaviour. Impulse buying is unplanned, and when you suddenly feel the urge to buy something immediately.

Please read the scenarios below. Would you buy on impulse in these scenarios?

S1: You are doing your routine food shopping in the supermarket and you see something you like or on sale but was not on your original shopping list. Would you buy it on impulse?

(Please tick) Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (pleasespecify) _____

S2: You and friends/family are having a day-out for shopping. Would you buy something on impulse? Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (pleasespecify) _____

S3: You and your friends are at a bar and it is about to close. The bar is ringing the bell for "the last order", would you buy another drink after you heard the last call?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (pleas specify) _____

S4: You have to accompany someone to a department store even though you didn't plan to buy anything today. Is it likely that you end up buying something anyway?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (please specify) _____

S5: You have one thing short to complete your collection (Ex: Stamps, coins, or sport cards), one day you suddenly found this item, although it might be expensive and you are running out of money, would you get it anyway?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (please specify) _____

S6: Your credit card company now offers you several items this month to confer your credit points, although you know waiting longer and saving more points can get you a bigger reward (Ex: a flight ticket), would you spend your points now?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (please specify) _____

S7: You are browsing some luxury products such as Gucci or Prada at Harrods with your friends. You know that buying luxury products is a way to treat yourself well and your friends would admire it too. Would you impulse buy something now?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (please specify) _____

S8: You are dining in a high-end restaurant where has exclusive atmosphere and you see people around you enjoying their dessert or drink. Even after main course you are a bit full, would you order more dessert or drink?

Yes _____ No _____

If yes, please tick the most possible reason below: (Please tick only one!)

The item is on Sale		It's useful.		I like it		I am happy so I don't care.		positive feedback from others	
People around me are buying it.		Buying it will make me happy.		It's what I've been looking for		I am upset so cheer myself up.		Buying it makes me feel exclusive	
A good bargain that I can't miss.		I might need it in the future.		It's something that fits my taste.		I am in a hurry so just do it.		Buying it would make me fit in my social group	

Other: (please specify) _____

9. Please describe yourself with the characteristics below. Please tick, and do not leave any characteristic unmarked.

Characteristics	Never / almost never true	Usually not true	Sometimes but infrequently true	Occasionally	Often	Usually	Always /almost always true
Defend my own belief							
Affectionate							
Independent							
Sympathetic							
Assertive							
Sensitive to needs of others							
Strong personality							
Understanding							
Forceful							
Compassionate							
Having leadership abilities							

Eager to soothe hurt feelings							
Willing to take risks							
Warm							
Dominant							
Tender							
Willing to take a stand							
Love children							
Aggressive							
Gentle							

10. Please rate yourself with the description below. Please tick and do not leave any description unmarked.

	Not true at all	Rarely true	True	Very much true
1. I am not one of those people who blurt out things without thinking				
2. I like to stop and think things over before I do them				
3. I usually make up my mind through careful reasoning				
4. Before I get into a new situation I like to find out what to expect from it				
5. I usually think carefully before doing anything				
6. I have trouble controlling my impulses				
7. When I feel bad, I will often do things I later regret in order to make myself feel better now.				
8. Sometimes when I feel bad, I can't seem to stop what I am doing even though it is making me feel worse				
9. In the heat of an argument, I will often say things that I later regret				
10. Sometimes I do things on impulse that I later regret				
11. I generally seek new and exciting experiences and sensations				
12. I would enjoy parachute jumping				
13. I would like to learn to fly an airplane				
14. I would enjoy the sensation of skiing very fast down a high mountain slope				
15. I would like to go scuba diving				
16. I finish what I start				
17. I'm pretty good about pacing myself so as to get things done on time				
18. Once I start a project I almost always finish it				
19. There are so many little jobs that need to be done that I sometimes just ignore them all				

11. Please rate yourself with the description below. Please tick and do not leave any description unmarked.

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
1. I often buy things spontaneously.					
2. "Just do it" describes the way I buy things.					

3. I often buy thing without thinking.					
4. "I see it, I buy it" describes me.					
5. "Buy now, think about it later" describes me.					
6. Sometimes I feel like buying things on the spur-of-the-moment.					
7. I buy things according to how I feel at that moment.					
8. I carefully plan most of my purchase.					
9. Sometimes I am a bit reckless about what I buy.					

12. What factors would make you buy on impulse?

(Please tick)

	Not important at all	Unimportant	Neither important nor unimportant	Important	Extremely Important
If there is a promotion in the store	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When people around me are buying things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If it is a sale season now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I buy gifts for family/friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the window display attracts me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the shop atmosphere and deco attract me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I go out with my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The service of the shop staffs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The queue of checkout is long.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Browsing a store that I like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. How much money did you spend on your last impulse purchase?

- ☐ Under 20 pounds
- ☐ 20-50 pounds
- ☐ 50-100 pounds
- ☐ Above 100 pounds

14. Usually, what price range can you accept for your impulse buying?

- ☐ Under 20 pounds
- ☐ 20-50 pounds
- ☐ 50-100 pounds
- ☐ It depends on the item

15. How often do you buy things on impulse?

- ☐ More than once a week.
- ☐ At least once a week
- ☐ Once a month
- ☐ Less than once a month

16. Do you regret your impulse buying?

- ☐ All the time so I try to cut it down.
- ☐ All the time but I can't stop it.
- ☐ Sometimes so I don't like impulse buying.
- ☐ Sometimes but I still enjoy impulse buying.

17. What kind of items do you impulse buy the most? Ex: fashion items, food, dvds...

_____(Please specify)

18. Your age is

- ☐ 18-25
- ☐ 25-35
- ☐ 35-50
- ☐ Above 50

19. Your sex is

Male_____ Female_____

20. Your nationality is:_____(please specify)

Thank you very much for your time!

Appendix 2: Final Questionnaire (Chinese)

本問卷純屬學術研究之用，所有資料將保密且不另做商業用途，本研究主題為衝動型購買，衝動型購買意思是之前沒有計畫，但是當下突然有立即想購買的慾望，購買的產品小則可能只是一個巧克力，大則可能是電子用品甚至車子

請閱讀以下情境。如果是你在以下情境中 你會衝動型購買嗎？

S1: 你在一家超市做每周固定的食物採買，你突然看到你喜歡的東西或是打折的東西，但是你原先沒有計畫要買這些東西。你會衝動地買下嗎？

(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S2: 你跟你的家人或朋友決定今天出去逛街。你會衝動型購買嗎？

(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S3: 你跟你的朋友在酒吧裡，這時酒吧已經快要關門了，服務生在提醒大家此時是點飲料的最後機會，你會再買一杯嗎？(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S4: 你必須陪同某人去一趟百貨公司，但是你今天其實沒有打算要買什麼。你覺得今天到最後你有可能會買東西嗎？

(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S5: 你還差一樣東西就完成你的收藏了(比如說:郵票、錢幣、棒球卡)，某天你突然看見這樣東西，即使很貴而且你這個月快沒錢了，你還是會買嗎？

(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S6: 你的信用卡公司這個月提供幾樣商品讓你換你的紅利積點。即使你知道等久一點或再積多一點紅利你可以換到更好的東西(比如說 機票)，你會這個月就換你的紅利積點嗎？

(請勾選) 會_____ 不會_____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明)_____

S7: 你在新光三越逛一些名品的專櫃像 Gucci 或 Prada。你知道買高級品是犒賞自己的一種方法，也會讓你的朋友讚美你。你當下會衝動購買嗎？

(請勾選) 會 _____ 不會 _____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明) _____

S8: 你在一個氣氛很好的高級餐廳用餐，你看到周遭的人在享受他們的甜點跟飲料。即使吃完主餐你已經有點飽了，你會再加點甜點或飲料嗎？

(請勾選) 會 _____ 不會 _____

如果會，原因可能是甚麼？請圈選以下各項原因的“是”與“否”：

因為它在打折	是否	因為有用	是否	因為我喜歡這件商品	是否	我心情好所以就不管了	是否	別人可能會給我正面的評價	是否
我旁邊的人都在買	是否	我買這件東西會讓我開心	是否	這是我一直要找的東西	是否	我心情不好所以買東西會讓我心情好	是否	買下它讓我覺得我有不一樣的身分地位	是否
很值得不買太可惜了	是否	我可能以後用的到	是否	這件東西合乎我的品味	是否	我趕時間所以先買再說	是否	買下它會讓我更融入我的生活圈	是否

其他原因: (請註明) _____

請用下列的特質形容你自己並勾選以下的程度類別，請記得回答所有的特質。

特質	完全不是/ 幾乎完全不是	通常不是	有的時候是 但是很少	有的時候是	通常是	常常是	一直/幾乎 一直都是
捍衛我自己的信念							
充滿熱情							
獨立							
有同情心							
武斷							
對他人的需求敏感							
個性強烈							
能諒解人							
堅強							

憐憫、富有同情心							
具有領導特質							
熱切的安慰他人							
願意冒險							
溫暖熱情的							
主導性、支配慾強							
溫柔							
願意選擇立場							
喜愛小孩							
好鬥的 有幹勁的							
溫和的							

請評估你自己是否合乎以下敘述，請記得勾選並回答每一題。

	完全不是	很少是	是	非常是
1. 我不是那種未經思考就隨便說話的人				
2. 我喜歡在做事情之前先停下來反覆思考				
3. 我通常會經由仔細的考慮和推理才下定決心				
4. 在我進入一個新環境和情況前，我會想要知道可以從中期待什麼。				
	完全不是	很少是	是	非常是
5. 在我開始做任何事情之前，我通常會仔細考慮。				
6. 我有控制衝動的困難。				
7. 當我感覺不好的時候，我時常會做些之後可能會讓我後悔，但是在當下能讓我感覺良好的事情。				
8. 有時當我感覺不好的時候，我似乎無法停止我當下正在做的事情，即使這些事情可能會讓我感覺變得更糟。.				
9. 在與他人爭論的激動處時，我時常說出之後會讓我後悔的言語。				
10. 有時候我會衝動地去做某件會讓我之後後悔的事情。				
11. 我常追求新鮮刺激的經驗還有感受。				
12. 我會喜歡跳傘				

13. 我會想要學開飛機。					
14. 我會享受那種從陡坡上快速滑下來的感覺。					
15. 我會想去潛水。					
16. 我會完成我已經開始做的事情。					
17. 我很會控制自己的步伐，所以我都可以按時的完成事情。					
18. 我一旦開始一項方案，我總是能夠完成它。					
19. 如果有太多瑣事需要我去做，我有時候會乾脆完全忽略它們。					
	十分不同意	不同意	介於同意和不同意之間	同意	十分同意
1. 我通常是自動自發地去買東西。					
2. “Just do it 做就對了” 是我買東西的方法。					
3. 我常常不經思考地買東西。					
4. 我是“看到它 我就買”的人。					
5. 我是“現在先買，之後再去後悔”的人。					
6. 我有時候覺得我買東西是當下的一時衝動。					
7. 我買東西要看我當時的感覺如何。					
8. 我大部分的購買行為都是經過仔細思考的。					
9. 我有時買的東西是魯莽、不計後果的購買。					

什麼因素會讓你衝動型購買？(請勾選)

	完全不重要	不重要	不明	重要	非常重要
當時店裡有沒有促銷	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
當我身邊的人正在買東西	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
現在是不是折扣季	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
當我幫家人或是朋友買禮物的時候	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
一家店的櫥窗擺設吸不吸引我	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
一家店的氣氛跟裝潢	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
跟家人出去	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
店內人員的態度	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

排隊結帳的人潮太多了	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
隨意逛逛一家我喜歡的店	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. 您上一次衝動型購買的時候大概花了多少錢？

- ☐ 台幣一千元以下
☐ 台幣一千元到兩千五百元
☐ 台幣兩千五到五千元
☐ 台幣五千元以上

2. 你覺得通常你可以接受花多少錢在衝動型購買？

- ☐ 台幣一千元以下
☐ 台幣一千元到兩千五百元
☐ 台幣兩千五百元
☐ 要看我買什麼東西

3. 你衝動型購買的頻率是？

- ☐ 一個禮拜一次以上.
☐ 至少一個禮拜一次
☐ 一個月一次
☐ 少於一個月一次

4. 你會後悔你的衝動型購買嗎？

- ☐ 常後悔，所以我會試著減少衝動型購買.
☐ 常後悔，但是我沒辦法停止
☐ 有時會，所以我不喜歡衝動型購買
☐ 有時會，但是我還是享受衝動型購買

5. 你最常衝動購買的東西是什麼？ Ex: 衣服、DVD、甜食...

6. 你的年齡是？

- ☐ 18-25 ☐ 25-35 ☐ 35-50 ☐ 50 以上

7. 你的性別是

男____ 女____

8. 你的國籍是：_____ (請註明) 十分感謝您的幫忙!

Appendix 3: Independent t-test for Consumer Behavioral Setting and Consumer Impulse Buying Choice

CC1

Group Statistics

	CC1	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	353	30.6317	6.65850	.35440
	1.00	61	32.3443	6.36104	.81445
TEMTOTAL	.00	353	6.8754	2.01874	.10745
	1.00	61	7.2787	2.13019	.27274
SOTOTAL	.00	353	11.6034	2.88042	.15331
	1.00	61	11.9016	2.78511	.35660
PHYTOTAL	.00	353	9.1360	2.64869	.14098
	1.00	61	10.0000	2.38048	.30479
REG	.00	348	3.1437	1.25991	.06754
	1.00	60	3.2167	1.27680	.16483

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	.000	.990	-1.867	412
	Equal variances not assumed			-1.928	84.357
TEMTOTAL	Equal variances assumed	.225	.636	-1.429	412
	Equal variances not assumed			-1.376	79.741
SOTOTAL	Equal variances assumed	.080	.777	-.750	412
	Equal variances not assumed			-.768	83.742
PHYTOTAL	Equal variances assumed	2.318	.129	-2.386	412
	Equal variances not assumed			-2.573	87.734
REG	Equal variances assumed	.001	.976	-.414	406
	Equal variances not assumed			-.410	80.089

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.063	-1.71253	.91737
	Equal variances not assumed	.057	-1.71253	.88821
TEMTOTAL	Equal variances assumed	.154	-.40333	.28222
	Equal variances not assumed	.173	-.40333	.29314
SOTOTAL	Equal variances assumed	.454	-.29824	.39750
	Equal variances not assumed	.444	-.29824	.38816
PHYTOTAL	Equal variances assumed	.017	-.86402	.36209
	Equal variances not assumed	.012	-.86402	.33581
REG	Equal variances assumed	.679	-.07299	.17646
	Equal variances not assumed	.683	-.07299	.17813

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-3.51584	.09077
	Equal variances not assumed	-3.47873	.05366
TEMTOTAL	Equal variances assumed	-.95811	.15144
	Equal variances not assumed	-.98674	.18007
SOTOTAL	Equal variances assumed	-1.07962	.48314
	Equal variances not assumed	-1.07016	.47369
PHYTOTAL	Equal variances assumed	-1.57579	-.15226
	Equal variances not assumed	-1.53141	-.19664
REG	Equal variances assumed	-.41988	.27391
	Equal variances not assumed	-.42748	.28150

CC2

Group Statistics

	CC2	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	259	29.8842	6.97518	.43342
	1.00	155	32.5548	5.66505	.45503
TEMTOTAL	.00	259	6.7413	2.12922	.13230
	1.00	155	7.2581	1.83699	.14755
SOTOTAL	.00	259	11.4247	2.96313	.18412
	1.00	155	12.0194	2.66159	.21378
PHYTOTAL	.00	259	8.7992	2.63221	.16356
	1.00	155	10.0387	2.43322	.19544
REG	.00	254	3.0906	1.27753	.08016
	1.00	154	3.2597	1.23036	.09915

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	4.591	.033	-4.036	412
	Equal variances not assumed			-4.250	375.639
TEMTOTAL	Equal variances assumed	6.247	.013	-2.513	412
	Equal variances not assumed			-2.607	361.644
SOTOTAL	Equal variances assumed	1.654	.199	-2.052	412
	Equal variances not assumed			-2.108	351.689
PHYTOTAL	Equal variances assumed	1.185	.277	-4.768	412
	Equal variances not assumed			-4.864	344.408
REG	Equal variances assumed	.377	.540	-1.315	406
	Equal variances not assumed			-1.327	332.486

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.000	-2.67067	.66174
	Equal variances not assumed	.000	-2.67067	.62841
TEMTOTAL	Equal variances assumed	.012	-.51675	.20563
	Equal variances not assumed	.009	-.51675	.19818
SOTOTAL	Equal variances assumed	.041	-.59464	.28984
	Equal variances not assumed	.036	-.59464	.28214
PHYTOTAL	Equal variances assumed	.000	-1.23948	.25993
	Equal variances not assumed	.000	-1.23948	.25485
REG	Equal variances assumed	.189	-.16919	.12868
	Equal variances not assumed	.185	-.16919	.12750

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-3.97149	-1.36985
	Equal variances not assumed	-3.90631	-1.43502
TEMTOTAL	Equal variances assumed	-.92097	-.11253
	Equal variances not assumed	-.90648	-.12702
SOTOTAL	Equal variances assumed	-1.16440	-.02489
	Equal variances not assumed	-1.14954	-.03975
PHYTOTAL	Equal variances assumed	-1.75044	-.72852
	Equal variances not assumed	-1.74074	-.73822
REG	Equal variances assumed	-.42215	.08377
	Equal variances not assumed	-.41999	.08161

CC3

Group Statistics

	CC3	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	100	30.0400	7.18854	.71885
	1.00	314	31.1529	6.43887	.36337
TEMTOTAL	.00	100	6.8800	2.24859	.22486
	1.00	314	6.9522	1.96964	.11115
SOTOTAL	.00	100	11.4300	3.21064	.32106
	1.00	314	11.7166	2.74809	.15508
PHYTOTAL	.00	100	8.6000	2.84268	.28427
	1.00	314	9.4745	2.52166	.14231
REG	.00	99	3.1616	1.35305	.13599
	1.00	309	3.1521	1.23248	.07011

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	2.488	.115	-1.463	412
	Equal variances not assumed			-1.382	152.897
TEMTOTAL	Equal variances assumed	2.703	.101	-.308	412
	Equal variances not assumed			-.288	150.453
SOTOTAL	Equal variances assumed	3.617	.058	-.871	412
	Equal variances not assumed			-.804	148.038
PHYTOTAL	Equal variances assumed	4.156	.042	-2.927	412
	Equal variances not assumed			-2.751	151.821
REG	Equal variances assumed	3.195	.075	.065	406
	Equal variances not assumed			.062	153.575

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.144	-1.11287	.76091
	Equal variances not assumed	.169	-1.11287	.80547
TEMTOTAL	Equal variances assumed	.758	-.07223	.23426
	Equal variances not assumed	.774	-.07223	.25083
SOTOTAL	Equal variances assumed	.384	-.28656	.32909
	Equal variances not assumed	.423	-.28656	.35656
PHYTOTAL	Equal variances assumed	.004	-.87452	.29882
	Equal variances not assumed	.007	-.87452	.31790
REG	Equal variances assumed	.948	.00951	.14582
	Equal variances not assumed	.951	.00951	.15300

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-2.60863	.38289
	Equal variances not assumed	-2.70416	.47843
TEMTOTAL	Equal variances assumed	-.53272	.38827
	Equal variances not assumed	-.56784	.42338
SOTOTAL	Equal variances assumed	-.93347	.36035
	Equal variances not assumed	-.99116	.41804
PHYTOTAL	Equal variances assumed	-1.46193	-.28712
	Equal variances not assumed	-1.50260	-.24645
REG	Equal variances assumed	-.27714	.29617
	Equal variances not assumed	-.29274	.31176

CC4

Group Statistics

	CC4	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	195	29.1179	6.75121	.48346
	1.00	219	32.4566	6.13096	.41429
TEMTOTAL	.00	195	6.6974	2.07979	.14894
	1.00	219	7.1461	1.98078	.13385
SOTOTAL	.00	195	10.9897	2.87540	.20591
	1.00	219	12.2329	2.73201	.18461
PHYTOTAL	.00	195	8.6718	2.53734	.18170
	1.00	219	9.7900	2.59705	.17549
REG	.00	191	2.9686	1.27282	.09210
	1.00	217	3.3180	1.23051	.08353

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	2.111	.147	-5.273	412
	Equal variances not assumed			-5.244	394.311
TEMTOTAL	Equal variances assumed	2.322	.128	-2.247	412
	Equal variances not assumed			-2.241	401.089
SOTOTAL	Equal variances assumed	.996	.319	-4.508	412
	Equal variances not assumed			-4.495	400.783
PHYTOTAL	Equal variances assumed	.038	.846	-4.420	412
	Equal variances not assumed			-4.426	408.454
REG	Equal variances assumed	.322	.571	-2.816	406
	Equal variances not assumed			-2.810	395.658

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.000	-3.33867	.63315
	Equal variances not assumed	.000	-3.33867	.63669
TEMTOTAL	Equal variances assumed	.025	-.44868	.19968
	Equal variances not assumed	.026	-.44868	.20024
SOTOTAL	Equal variances assumed	.000	-1.24313	.27573
	Equal variances not assumed	.000	-1.24313	.27655
PHYTOTAL	Equal variances assumed	.000	-1.11816	.25296
	Equal variances not assumed	.000	-1.11816	.25261
REG	Equal variances assumed	.005	-.34939	.12407
	Equal variances not assumed	.005	-.34939	.12434

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-4.58327	-2.09407
	Equal variances not assumed	-4.59041	-2.08694
TEMTOTAL	Equal variances assumed	-.84120	-.05617
	Equal variances not assumed	-.84234	-.05502
SOTOTAL	Equal variances assumed	-1.78515	-.70112
	Equal variances not assumed	-1.78681	-.69946
PHYTOTAL	Equal variances assumed	-1.61540	-.62092
	Equal variances not assumed	-1.61474	-.62157
REG	Equal variances assumed	-.59328	-.10549

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-4.58327	-2.09407
	Equal variances not assumed	-4.59041	-2.08694
TEMTOTAL	Equal variances assumed	-.84120	-.05617
	Equal variances not assumed	-.84234	-.05502
SOTOTAL	Equal variances assumed	-1.78515	-.70112
	Equal variances not assumed	-1.78681	-.69946
PHYTOTAL	Equal variances assumed	-1.61540	-.62092
	Equal variances not assumed	-1.61474	-.62157
REG	Equal variances assumed	-.59328	-.10549
	Equal variances not assumed	-.59383	-.10494

CC5

Group Statistics

	CC5	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	194	30.7010	7.10129	.50984
	1.00	220	31.0455	6.20853	.41858
TEMTOTAL	.00	194	6.9845	2.16299	.15529
	1.00	220	6.8909	1.92482	.12977
SOTOTAL	.00	194	11.6289	3.09711	.22236
	1.00	220	11.6636	2.65102	.17873
PHYTOTAL	.00	194	9.0000	2.71629	.19502
	1.00	220	9.4955	2.52747	.17040
REG	.00	190	3.1526	1.28601	.09330
	1.00	218	3.1560	1.24193	.08411

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	5.117	.024	-.527	412
	Equal variances not assumed			-.522	386.224
TEMTOTAL	Equal variances assumed	1.204	.273	.466	412
	Equal variances not assumed			.463	389.344
SOTOTAL	Equal variances assumed	6.416	.012	-.123	412
	Equal variances not assumed			-.122	382.312
PHYTOTAL	Equal variances assumed	.442	.507	-1.922	412
	Equal variances not assumed			-1.913	396.515
REG	Equal variances assumed	.696	.405	-.027	406
	Equal variances not assumed			-.027	394.252

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.599	-.34442	.65413
	Equal variances not assumed	.602	-.34442	.65966
TEMTOTAL	Equal variances assumed	.641	.09363	.20090
	Equal variances not assumed	.644	.09363	.20238
SOTOTAL	Equal variances assumed	.902	-.03477	.28253
	Equal variances not assumed	.903	-.03477	.28529
PHYTOTAL	Equal variances assumed	.055	-.49545	.25781
	Equal variances not assumed	.056	-.49545	.25898
REG	Equal variances assumed	.979	-.00333	.12532
	Equal variances not assumed	.979	-.00333	.12562

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-1.63028	.94143
	Equal variances not assumed	-1.64139	.95255
TEMTOTAL	Equal variances assumed	-.30130	.48855
	Equal variances not assumed	-.30426	.49152
SOTOTAL	Equal variances assumed	-.59015	.52061
	Equal variances not assumed	-.59570	.52616
PHYTOTAL	Equal variances assumed	-1.00224	.01133
	Equal variances not assumed	-1.00459	.01368
REG	Equal variances assumed	-.24968	.24302
	Equal variances not assumed	-.25029	.24363

CC6

Group Statistics

	CC6	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	383	30.8538	6.67884	.34127
	1.00	31	31.2581	6.16964	1.10810
TEMTOTAL	.00	383	6.9295	2.04088	.10428
	1.00	31	7.0000	2.03306	.36515
SOTOTAL	.00	383	11.6475	2.89494	.14792
	1.00	31	11.6452	2.51062	.45092
PHYTOTAL	.00	383	9.2272	2.61752	.13375
	1.00	31	9.7097	2.73488	.49120
REG	.00	377	3.1751	1.26370	.06508
	1.00	31	2.9032	1.22079	.21926

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	.166	.684	-.326	412
	Equal variances not assumed			-.349	35.936
TEMTOTAL	Equal variances assumed	.026	.873	-.185	412
	Equal variances not assumed			-.186	35.075
SOTOTAL	Equal variances assumed	.784	.376	.004	412
	Equal variances not assumed			.005	36.771
PHYTOTAL	Equal variances assumed	.459	.498	-.984	412
	Equal variances not assumed			-.948	34.599
REG	Equal variances assumed	.355	.552	1.154	406
	Equal variances not assumed			1.189	35.498

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.745	-.40428	1.24048
	Equal variances not assumed	.729	-.40428	1.15946
TEMTOTAL	Equal variances assumed	.853	-.07050	.38099
	Equal variances not assumed	.854	-.07050	.37975
SOTOTAL	Equal variances assumed	.996	.00236	.53568
	Equal variances not assumed	.996	.00236	.47456
PHYTOTAL	Equal variances assumed	.326	-.48252	.49040
	Equal variances not assumed	.350	-.48252	.50908
REG	Equal variances assumed	.249	.27184	.23553
	Equal variances not assumed	.243	.27184	.22872

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-2.84273	2.03418
	Equal variances not assumed	-2.75592	1.94737
TEMTOTAL	Equal variances assumed	-.81943	.67843
	Equal variances not assumed	-.84137	.70037
SOTOTAL	Equal variances assumed	-1.05065	1.05536
	Equal variances not assumed	-.95940	.96412
PHYTOTAL	Equal variances assumed	-1.44653	.48148
	Equal variances not assumed	-1.51645	.55140
REG	Equal variances assumed	-.19117	.73485
	Equal variances not assumed	-.19224	.73593

CC7

Group Statistics

	CC7	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	24	29.5417	7.01538	1.43201
	1.00	390	30.9667	6.61240	.33483
TEMTOTAL	.00	24	6.2917	1.98865	.40593
	1.00	390	6.9744	2.03677	.10314
SOTOTAL	.00	24	11.5000	3.25710	.66485
	1.00	390	11.6564	2.84382	.14400
PHYTOTAL	.00	24	8.5000	3.00724	.61385
	1.00	390	9.3103	2.59793	.13155
REG	.00	24	3.2500	1.25974	.25714
	1.00	384	3.1484	1.26258	.06443

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	.172	.679	-1.021	412
	Equal variances not assumed			-.969	25.579
TEMTOTAL	Equal variances assumed	.070	.791	-1.596	412
	Equal variances not assumed			-1.630	26.059
SOTOTAL	Equal variances assumed	.395	.530	-.259	412
	Equal variances not assumed			-.230	25.205
PHYTOTAL	Equal variances assumed	1.692	.194	-1.469	412
	Equal variances not assumed			-1.291	25.158
REG	Equal variances assumed	.129	.720	.382	406
	Equal variances not assumed			.383	25.972

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.308	-1.42500	1.39553
	Equal variances not assumed	.342	-1.42500	1.47063
TEMTOTAL	Equal variances assumed	.111	-.68269	.42780
	Equal variances not assumed	.115	-.68269	.41883
SOTOTAL	Equal variances assumed	.796	-.15641	.60327
	Equal variances not assumed	.820	-.15641	.68027
PHYTOTAL	Equal variances assumed	.143	-.81026	.55153
	Equal variances not assumed	.209	-.81026	.62779
REG	Equal variances assumed	.702	.10156	.26562
	Equal variances not assumed	.705	.10156	.26509

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	-4.16824	1.31824
	Equal variances not assumed	-4.45035	1.60035
TEMTOTAL	Equal variances assumed	-1.52363	.15825
	Equal variances not assumed	-1.54351	.17813
SOTOTAL	Equal variances assumed	-1.34228	1.02946
	Equal variances not assumed	-1.55687	1.24405
PHYTOTAL	Equal variances assumed	-1.89443	.27391
	Equal variances not assumed	-2.10280	.48228
REG	Equal variances assumed	-.42060	.62373
	Equal variances not assumed	-.44337	.64650

CC8

Group Statistics

	CC8	N	Mean	Std. Deviation	Std. Error Mean
SETTOTAL	.00	256	31.5898	6.29408	.39338
	1.00	158	29.7405	7.02605	.55896
TEMTOTAL	.00	256	7.1289	2.09832	.13114
	1.00	158	6.6203	1.90075	.15122
SOTOTAL	.00	256	12.0195	2.75745	.17234
	1.00	158	11.0443	2.94178	.23404
PHYTOTAL	.00	256	9.3594	2.62188	.16387
	1.00	158	9.1076	2.63389	.20954
REG	.00	251	3.1434	1.27567	.08052
	1.00	157	3.1720	1.24127	.09906

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
SETTOTAL	Equal variances assumed	1.296	.256	2.777	412
	Equal variances not assumed			2.706	304.973
TEMTOTAL	Equal variances assumed	1.522	.218	2.482	412
	Equal variances not assumed			2.541	357.482
SOTOTAL	Equal variances assumed	.676	.412	3.407	412
	Equal variances not assumed			3.355	316.193
PHYTOTAL	Equal variances assumed	.012	.913	.948	412
	Equal variances not assumed			.947	331.433
REG	Equal variances assumed	1.258	.263	-.222	406
	Equal variances not assumed			-.224	338.123

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
SETTOTAL	Equal variances assumed	.006	1.84934	.66596
	Equal variances not assumed	.007	1.84934	.68351
TEMTOTAL	Equal variances assumed	.013	.50865	.20490
	Equal variances not assumed	.011	.50865	.20016
SOTOTAL	Equal variances assumed	.001	.97523	.28622
	Equal variances not assumed	.001	.97523	.29064
PHYTOTAL	Equal variances assumed	.344	.25178	.26572
	Equal variances not assumed	.345	.25178	.26601
REG	Equal variances assumed	.824	-.02855	.12847
	Equal variances not assumed	.823	-.02855	.12766

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
SETTOTAL	Equal variances assumed	.54023	3.15845
	Equal variances not assumed	.50434	3.19433
TEMTOTAL	Equal variances assumed	.10587	.91143
	Equal variances not assumed	.11501	.90230
SOTOTAL	Equal variances assumed	.41259	1.53786
	Equal variances not assumed	.40339	1.54707
PHYTOTAL	Equal variances assumed	-.27055	.77412
	Equal variances not assumed	-.27150	.77506
REG	Equal variances assumed	-.28110	.22400
	Equal variances not assumed	-.27966	.22256

Appendix 4: Independent t-test for Impulse Buying Choice and UPPS

CC1

Group Statistics

	CC1	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	353	14.7280	2.41556	.12857
	1.00	61	14.5574	2.54640	.32603
UTOTAL	.00	353	10.4278	2.72009	.14478
	1.00	61	11.8197	2.96933	.38018
SENTOTAL	.00	353	11.1898	3.78104	.20124
	1.00	61	12.1311	4.37978	.56077
PERTOTAL	.00	353	11.7620	2.08486	.11097
	1.00	61	11.3443	2.62606	.33623

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	.002	.966	.505	412
	Equal variances not assumed			.487	79.782
UTOTAL	Equal variances assumed	1.674	.196	-3.640	412
	Equal variances not assumed			-3.421	78.382
SENTOTAL	Equal variances assumed	3.023	.083	-1.752	412
	Equal variances not assumed			-1.580	76.234
PERTOTAL	Equal variances assumed	8.947	.003	1.387	412
	Equal variances not assumed			1.180	73.633

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.613	.17067	.33764
	Equal variances not assumed	.628	.17067	.35047
UTOTAL	Equal variances assumed	.000	-1.39191	.38239
	Equal variances not assumed	.001	-1.39191	.40682
SENTOTAL	Equal variances assumed	.080	-.94135	.53716
	Equal variances not assumed	.118	-.94135	.59579
PERTOTAL	Equal variances assumed	.166	.41778	.30118
	Equal variances not assumed	.242	.41778	.35407

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-.49305	.83438
	Equal variances not assumed	-.52681	.86815
UTOTAL	Equal variances assumed	-2.14359	-.64023
	Equal variances not assumed	-2.20176	-.58206
SENTOTAL	Equal variances assumed	-1.99727	.11458
	Equal variances not assumed	-2.12791	.24522
PERTOTAL	Equal variances assumed	-.17426	1.00981
	Equal variances not assumed	-.28778	1.12334

CC2

Group Statistics

	CC2	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	259	14.4826	2.52174	.15669
	1.00	155	15.0710	2.23639	.17963
UTOTAL	.00	259	10.5637	2.78263	.17290
	1.00	155	10.7484	2.82979	.22729
SENTOTAL	.00	259	11.1737	3.91537	.24329
	1.00	155	11.5871	3.82878	.30754
PERTOTAL	.00	259	11.7838	2.27549	.14139
	1.00	155	11.5613	1.99377	.16014

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	1.332	.249	-2.395	412
	Equal variances not assumed			-2.468	354.881
UTOTAL	Equal variances assumed	.164	.686	-.649	412
	Equal variances not assumed			-.647	319.866
SENTOTAL	Equal variances assumed	.044	.835	-1.048	412
	Equal variances not assumed			-1.054	329.938
PERTOTAL	Equal variances assumed	2.619	.106	1.008	412
	Equal variances not assumed			1.041	357.871

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.017	-.58834	.24565
	Equal variances not assumed	.014	-.58834	.23837
UTOTAL	Equal variances assumed	.516	-.18468	.28438
	Equal variances not assumed	.518	-.18468	.28558
SENTOTAL	Equal variances assumed	.295	-.41335	.39435
	Equal variances not assumed	.293	-.41335	.39213
PERTOTAL	Equal variances assumed	.314	.22249	.22082
	Equal variances not assumed	.298	.22249	.21363

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-1.07123	-.10545
	Equal variances not assumed	-1.05714	-.11955
UTOTAL	Equal variances assumed	-.74369	.37433
	Equal variances not assumed	-.74654	.37718
SENTOTAL	Equal variances assumed	-1.18853	.36183
	Equal variances not assumed	-1.18475	.35804
PERTOTAL	Equal variances assumed	-.21158	.65657
	Equal variances not assumed	-.19763	.64262

CC3

Group Statistics

	CC3	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	100	15.1800	2.38844	.23884
	1.00	314	14.5510	2.43095	.13719
UTOTAL	.00	100	9.9400	2.66219	.26622
	1.00	314	10.8535	2.80874	.15851
SENTOTAL	.00	100	11.0800	3.63674	.36367
	1.00	314	11.4076	3.96140	.22355
PERTOTAL	.00	100	11.4900	2.31593	.23159
	1.00	314	11.7675	2.12698	.12003

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	.237	.627	2.263	412
	Equal variances not assumed			2.284	169.270
UTOTAL	Equal variances assumed	.260	.610	-2.868	412
	Equal variances not assumed			-2.948	174.688
SENTOTAL	Equal variances assumed	2.123	.146	-.734	412
	Equal variances not assumed			-.768	179.833
PERTOTAL	Equal variances assumed	1.066	.302	-1.112	412
	Equal variances not assumed			-1.064	155.776

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.024	.62904	.27797
	Equal variances not assumed	.024	.62904	.27544

UTOTAL	Equal variances assumed	.004	-.91350	.31855
	Equal variances not assumed	.004	-.91350	.30983
SENTOTAL	Equal variances assumed	.463	-.32764	.44619
	Equal variances not assumed	.444	-.32764	.42689
PERTOTAL	Equal variances assumed	.267	-.27752	.24962
	Equal variances not assumed	.289	-.27752	.26085

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	.08263	1.17546
	Equal variances not assumed	.08531	1.17278
UTOTAL	Equal variances assumed	-1.53969	-.28732
	Equal variances not assumed	-1.52500	-.30200
SENTOTAL	Equal variances assumed	-1.20474	.54946
	Equal variances not assumed	-1.17000	.51472
PERTOTAL	Equal variances assumed	-.76820	.21316
	Equal variances not assumed	-.79278	.23775

CC4

Group Statistics

	CC4	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	195	14.7026	2.52487	.18081
	1.00	219	14.7032	2.35371	.15905
UTOTAL	.00	195	10.1846	2.83694	.20316
	1.00	219	11.0320	2.70811	.18300
SENTOTAL	.00	195	11.3590	4.07714	.29197
	1.00	219	11.3014	3.71219	.25085
PERTOTAL	.00	195	11.6154	2.36834	.16960
	1.00	219	11.7763	1.98854	.13437

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	2.090	.149	-.003	412
	Equal variances not assumed			-.003	398.208
UTOTAL	Equal variances assumed	.005	.942	-3.107	412
	Equal variances not assumed			-3.099	401.380
SENTOTAL	Equal variances assumed	4.195	.041	.150	412
	Equal variances not assumed			.150	394.715
PERTOTAL	Equal variances assumed	6.400	.012	-.751	412
	Equal variances not assumed			-.743	380.556

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.998	-.00063	.23983
	Equal variances not assumed	.998	-.00063	.24081
UTOTAL	Equal variances assumed	.002	-.84735	.27269
	Equal variances not assumed	.002	-.84735	.27342
SENTOTAL	Equal variances assumed	.880	.05760	.38284
	Equal variances not assumed	.881	.05760	.38493
PERTOTAL	Equal variances assumed	.453	-.16087	.21422
	Equal variances not assumed	.458	-.16087	.21638

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-.47208	.47081
	Equal variances not assumed	-.47405	.47278
UTOTAL	Equal variances assumed	-1.38338	-.31132
	Equal variances not assumed	-1.38487	-.30983
SENTOTAL	Equal variances assumed	-.69496	.81017
	Equal variances not assumed	-.69916	.81437
PERTOTAL	Equal variances assumed	-.58196	.26022
	Equal variances not assumed	-.58632	.26458

CC5

Group Statistics

	CC5	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	194	14.7629	2.46330	.17685
	1.00	220	14.6500	2.41007	.16249
UTOTAL	.00	194	10.4742	2.55952	.18376
	1.00	220	10.7727	2.99210	.20173
SENTOTAL	.00	194	10.6443	3.94946	.28355
	1.00	220	11.9318	3.73064	.25152
PERTOTAL	.00	194	11.7268	2.14804	.15422
	1.00	220	11.6773	2.20221	.14847

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df

PRETOTAL	Equal variances assumed	.839	.360	.471	412
	Equal variances not assumed			.470	403.177
UTOTAL	Equal variances assumed	5.325	.022	-1.083	412
	Equal variances not assumed			-1.094	411.631
SENTOTAL	Equal variances assumed	.707	.401	-3.409	412
	Equal variances not assumed			-3.397	398.680
PERTOTAL	Equal variances assumed	.076	.782	.231	412
	Equal variances not assumed			.231	407.817

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.638	.11289	.23984
	Equal variances not assumed	.639	.11289	.24017
UTOTAL	Equal variances assumed	.279	-.29850	.27555
	Equal variances not assumed	.275	-.29850	.27288
SENTOTAL	Equal variances assumed	.001	-1.28749	.37768
	Equal variances not assumed	.001	-1.28749	.37903
PERTOTAL	Equal variances assumed	.817	.04953	.21441
	Equal variances not assumed	.817	.04953	.21408

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-.35857	.58434
	Equal variances not assumed	-.35925	.58502
UTOTAL	Equal variances assumed	-.84017	.24316
	Equal variances not assumed	-.83491	.23791

SENTOTAL	Equal variances assumed	-2.02990	-.54508
	Equal variances not assumed	-2.03264	-.54234
PERTOTAL	Equal variances assumed	-.37194	.47101
	Equal variances not assumed	-.37130	.47036

CC6

Group Statistics

	CC6	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	383	14.7023	2.42266	.12379
	1.00	31	14.7097	2.59735	.46650
UTOTAL	.00	383	10.6005	2.78547	.14233
	1.00	31	11.0323	2.97191	.53377
SENTOTAL	.00	383	11.4021	3.92071	.20034
	1.00	31	10.4194	3.31435	.59528
PERTOTAL	.00	383	11.7311	2.18473	.11163
	1.00	31	11.3226	2.03940	.36629

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	.046	.831	-.016	412
	Equal variances not assumed			-.015	34.360
UTOTAL	Equal variances assumed	.162	.687	-.826	412
	Equal variances not assumed			-.782	34.404
SENTOTAL	Equal variances assumed	1.297	.255	1.356	412
	Equal variances not assumed			1.565	37.143
PERTOTAL	Equal variances assumed	.088	.768	1.006	412
	Equal variances not assumed			1.067	35.808

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.987	-.00733	.45484
	Equal variances not assumed	.988	-.00733	.48264
UTOTAL	Equal variances assumed	.409	-.43174	.52275
	Equal variances not assumed	.440	-.43174	.55242
SENTOTAL	Equal variances assumed	.176	.98273	.72448
	Equal variances not assumed	.126	.98273	.62808
PERTOTAL	Equal variances assumed	.315	.40849	.40604
	Equal variances not assumed	.293	.40849	.38292

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-.90143	.88678
	Equal variances not assumed	-.98780	.97314
UTOTAL	Equal variances assumed	-1.45933	.59586
	Equal variances not assumed	-1.55391	.69043
SENTOTAL	Equal variances assumed	-.44140	2.40686
	Equal variances not assumed	-.28972	2.25519
PERTOTAL	Equal variances assumed	-.38969	1.20667
	Equal variances not assumed	-.36825	1.18523

CC7

Group Statistics

	CC7	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	24	15.5000	2.70266	.55168
	1.00	390	14.6538	2.41049	.12206
UTOTAL	.00	24	10.4583	2.51913	.51422
	1.00	390	10.6436	2.81725	.14266
SENTOTAL	.00	24	10.2083	3.48885	.71216
	1.00	390	11.3974	3.90023	.19750
PERTOTAL	.00	24	11.9583	2.40433	.49078
	1.00	390	11.6846	2.16196	.10947

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	.642	.424	1.657	412
	Equal variances not assumed			1.498	25.303
UTOTAL	Equal variances assumed	.557	.456	-.314	412
	Equal variances not assumed			-.347	26.667
SENTOTAL	Equal variances assumed	.120	.729	-1.458	412
	Equal variances not assumed			-1.609	26.664
PERTOTAL	Equal variances assumed	.091	.763	.598	412
	Equal variances not assumed			.544	25.342

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.098	.84615	.51058
	Equal variances not assumed	.147	.84615	.56502
UTOTAL	Equal variances assumed	.753	-.18526	.58918
	Equal variances not assumed	.731	-.18526	.53364
SENTOTAL	Equal variances assumed	.146	-1.18910	.81567
	Equal variances not assumed	.119	-1.18910	.73904
PERTOTAL	Equal variances assumed	.550	.27372	.45768
	Equal variances not assumed	.591	.27372	.50284

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	-.15751	1.84982
	Equal variances not assumed	-.31682	2.00913
UTOTAL	Equal variances assumed	-1.34342	.97291
	Equal variances not assumed	-1.28083	.91032
SENTOTAL	Equal variances assumed	-2.79251	.41430
	Equal variances not assumed	-2.70637	.32817
PERTOTAL	Equal variances assumed	-.62596	1.17339
	Equal variances not assumed	-.76120	1.30863

CC8

Group Statistics

	CC8	N	Mean	Std. Deviation	Std. Error Mean
PRETOTAL	.00	256	14.9453	2.40199	.15012
	1.00	158	14.3101	2.43881	.19402
UTOTAL	.00	256	10.3203	2.58634	.16165
	1.00	158	11.1392	3.05255	.24285
SENTOTAL	.00	256	10.3125	3.52526	.22033
	1.00	158	12.9747	3.88358	.30896
PERTOTAL	.00	256	11.7188	2.07104	.12944
	1.00	158	11.6709	2.33893	.18608

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
PRETOTAL	Equal variances assumed	.009	.926	2.599	412
	Equal variances not assumed			2.589	328.720
UTOTAL	Equal variances assumed	9.004	.003	-2.919	412
	Equal variances not assumed			-2.807	291.687
SENTOTAL	Equal variances assumed	1.368	.243	-7.178	412
	Equal variances not assumed			-7.015	308.212
PERTOTAL	Equal variances assumed	4.058	.045	.217	412
	Equal variances not assumed			.211	302.148

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
PRETOTAL	Equal variances assumed	.010	.63519	.24444
	Equal variances not assumed	.010	.63519	.24532
UTOTAL	Equal variances assumed	.004	-.81893	.28057
	Equal variances not assumed	.005	-.81893	.29173
SENTOTAL	Equal variances assumed	.000	-2.66218	.37088
	Equal variances not assumed	.000	-2.66218	.37948
PERTOTAL	Equal variances assumed	.828	.04786	.22025
	Equal variances not assumed	.833	.04786	.22667

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
PRETOTAL	Equal variances assumed	.15469	1.11568
	Equal variances not assumed	.15259	1.11778
UTOTAL	Equal variances assumed	-1.37046	-.26740
	Equal variances not assumed	-1.39308	-.24477
SENTOTAL	Equal variances assumed	-3.39124	-1.93313
	Equal variances not assumed	-3.40887	-1.91549
PERTOTAL	Equal variances assumed	-.38509	.48082
	Equal variances not assumed	-.39819	.49391

Appendix 5: Independent T-test and Chi-square Crosstab on Cultural Background

Impulse Buying Choice

Group Statistics					
	NATIONAL	N	Mean	Std. Deviation	Std. Error Mean
CCIBTOTAL	BRITISH	201	4.0199	1.29985	.09168
	TAIWANESE	213	3.4789	1.50652	.10322
OPENCCIB	BRITISH	201	2.6269	.77141	.05441
	TAIWANESE	213	2.1455	.98212	.06729
CLOSEDCCIB	BRITISH	201	1.3930	.94855	.06691
	TAIWANESE	213	1.3286	.92908	.06366

Independent Samples Test					
		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	df
CCIBTOTAL	Equal variances assumed	8.673	.003	3.902	412
	Equal variances not assumed			3.919	408.768
OPENCCIB	Equal variances assumed	4.916	.027	5.524	412
	Equal variances not assumed			5.562	399.027
CLOSEDCCIB	Equal variances assumed	.150	.698	.698	412
	Equal variances not assumed			.697	409.454

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
CCIBTOTAL	Equal variances assumed	.000	.54103	.13865
	Equal variances not assumed	.000	.54103	.13806
OPENCCIB	Equal variances assumed	.000	.48133	.08714
	Equal variances not assumed	.000	.48133	.08654
CLOSEDCCIB	Equal variances assumed	.486	.06440	.09230
	Equal variances not assumed	.486	.06440	.09235

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
CCIBTOTAL	Equal variances assumed	.26847	.81358
	Equal variances not assumed	.26963	.81243
OPENCCIB	Equal variances assumed	.31004	.65261
	Equal variances not assumed	.31120	.65146
CLOSEDCCIB	Equal variances assumed	-.11703	.24583
	Equal variances not assumed	-.11715	.24594

Chi-Square Crosstab on Impulse Buying Choice

CC1

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC1	.00	Count	163	190	353
		% within CC1	46.2%	53.8%	100.0%
		% within NATIONAL	81.1%	89.2%	85.3%
	1.00	Count	38	23	61
		% within CC1	62.3%	37.7%	100.0%
		% within NATIONAL	18.9%	10.8%	14.7%
Total	Count		201	213	414
		% within CC1	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.410 ^a	1	.020	.026	.014
Continuity Correction ^b	4.784	1	.029		
Likelihood Ratio	5.446	1	.020		
Fisher's Exact Test					
Linear-by-Linear Association	5.397	1	.020		
N of Valid Cases	414				

CC2

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC2	.00	Count	144	115	259
		% within CC2	55.6%	44.4%	100.0%
		% within NATIONAL	71.6%	54.0%	62.6%
	1.00	Count	57	98	155
		% within CC2	36.8%	63.2%	100.0%
		% within NATIONAL	28.4%	46.0%	37.4%
Total		Count	201	213	414
		% within CC2	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.756 ^a	1	.000	.000	.000
Continuity Correction ^b	13.013	1	.000		
Likelihood Ratio	13.881	1	.000		
Fisher's Exact Test					
Linear-by-Linear Association	13.723	1	.000		
N of Valid Cases	414				

CC3

Crosstab

			NATIONAL		
			BRITISH	TAIWANESE	Total
CC3	.00	Count	24	76	100
		% within CC3Situation	24.0%	76.0%	100.0%
		% within NATIONAL	11.9%	35.7%	24.2%
	1.00	Count	177	137	314
		% within CC3Situation	56.4%	43.6%	100.0%
		% within NATIONAL	88.1%	64.3%	75.8%
Total	Count	201	213	414	
	% within CC3Situation	48.6%	51.4%	100.0%	
	% within NATIONAL	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	31.814 ^a	1	.000	.000	.000
Continuity Correction ^b	30.532	1	.000		
Likelihood Ratio	33.175	1	.000		
Fisher's Exact Test					
Linear-by-Linear Association	31.738	1	.000		
N of Valid Cases	414				

CC4

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC4	.00	Count	114	81	195
		% within CC4	58.5%	41.5%	100.0%
		% within NATIONAL	56.7%	38.0%	47.1%
	1.00	Count	87	132	219
		% within CC4	39.7%	60.3%	100.0%
		% within NATIONAL	43.3%	62.0%	52.9%
Total	Count		201	213	414
		% within CC4	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.496 ^a	1	.000	.000	.000
Continuity Correction ^b	13.755	1	.000		
Likelihood Ratio	14.576	1	.000		
Fisher's Exact Test					
Linear-by-Linear Association	14.461	1	.000		
N of Valid Cases	414				

CC5

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC5	.00	Count	84	110	194
		% within CC5	43.3%	56.7%	100.0%
		% within NATIONAL	41.8%	51.6%	46.9%

1.00	Count	117	103	220
	% within CC5	53.2%	46.8%	100.0%
	% within NATIONAL	58.2%	48.4%	53.1%
Total	Count	201	213	414
	% within CC5	48.6%	51.4%	100.0%
	% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.031 ^a	1	.045	.049	.028
Continuity Correction ^b	3.645	1	.056		
Likelihood Ratio	4.039	1	.044		
Fisher's Exact Test					
Linear-by-Linear Association	4.021	1	.045		
N of Valid Cases	414				

CC6

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC6	.00	Count	188	195	383
		% within CC6	49.1%	50.9%	100.0%
		% within NATIONAL	93.5%	91.5%	92.5%
	1.00	Count	13	18	31
		% within CC6	41.9%	58.1%	100.0%
		% within NATIONAL	6.5%	8.5%	7.5%
Total	Count		201	213	414
		% within CC6	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.587 ^a	1	.444	.462	.282
Continuity Correction ^b	.336	1	.562		
Likelihood Ratio	.590	1	.442		
Fisher's Exact Test					
Linear-by-Linear Association	.586	1	.444		
N of Valid Cases	414				

CC7

Crosstab

			NATIONAL		Total
			BRITISH	TAIWANESE	
CC7situation	.00	Count	5	19	24
		% within CC7situation	20.8%	79.2%	100.0%
		% within NATIONAL	2.5%	8.9%	5.8%
	1.00	Count	196	194	390
		% within CC7situation	50.3%	49.7%	100.0%
		% within NATIONAL	97.5%	91.1%	94.2%
Total		Count	201	213	414
		% within CC7situation	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.836 ^a	1	.005	.006	.004
Continuity Correction ^b	6.702	1	.010		
Likelihood Ratio	8.370	1	.004		
Fisher's Exact Test					
Linear-by-Linear Association	7.817	1	.005		
N of Valid Cases	414				

CC8

Crosstab

			NATIONAL		
			BRITISH	TAIWANESE	Total
CC8situation	.00	Count	78	178	256
		% within CC8situation	30.5%	69.5%	100.0%
		% within NATIONAL	38.8%	83.6%	61.8%
	1.00	Count	123	35	158
		% within CC8situation	77.8%	22.2%	100.0%
		% within NATIONAL	61.2%	16.4%	38.2%
Total		Count	201	213	414
		% within CC8situation	48.6%	51.4%	100.0%
		% within NATIONAL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	87.801 ^a	1	.000	.000	.000
Continuity Correction ^b	85.915	1	.000		
Likelihood Ratio	91.700	1	.000		
Fisher's Exact Test					
Linear-by-Linear Association	87.589	1	.000		
N of Valid Cases	414				

Appendix 6: Binary Logistic Regression – Learning History and the BPM matrix

Accomplishment

CC1 Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	21.082	5	.001
	Block	21.082	5	.001
	Model	21.082	5	.001

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	325.082 ^a	.050	.088

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	7.444	8	.490

Contingency Table for Hosmer and Lemeshow Test

		CC1 = .00		CC1 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	40	38.712	1	2.288	41
	2	35	37.819	6	3.181	41
	3	38	37.197	3	3.803	41
	4	38	36.700	3	4.300	41
	5	34	36.224	7	4.776	41
	6	38	35.615	3	5.385	41
	7	33	34.941	8	6.059	41
	8	34	34.040	7	6.960	41
	9	32	32.234	9	8.766	41
	10	31	29.518	14	15.482	45

Classification Table^a

Observed			Predicted		
			CC1		Percentage Correct
			.00	1.00	
Step 1	CC1	.00	353	0	100.0
		1.00	59	2	3.3
Overall Percentage					85.7

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.063	.026	5.960	1	.015	1.065
	PRETOTAL	.060	.063	.911	1	.340	1.062
	SENTOTAL	.047	.036	1.680	1	.195	1.048
	UTOTAL	.095	.061	2.445	1	.118	1.099
	PERTOTAL	-.023	.069	.110	1	.741	.978
	Constant	-5.576	1.533	13.221	1	.000	.004

a. Variable(s) entered on step 1: IBTOTAL, PRETOTAL, SENTOTAL, UTOTAL, PERTOTAL.

CC2

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	13.345	5	.020
	Block	13.345	5	.020
	Model	13.345	5	.020

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	534.174 ^a	.032	.043

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	7.418	8	.492

Contingency Table for Hosmer and Lemeshow Test

		CC2 = .00		CC2 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	34	31.321	7	9.679	41
	2	27	29.179	14	11.821	41
	3	27	28.003	14	12.997	41
	4	26	27.133	15	13.867	41
	5	31	26.437	10	14.563	41
	6	21	25.664	20	15.336	41
	7	26	24.714	15	16.286	41
	8	26	23.709	15	17.291	41
	9	20	22.134	21	18.866	41
	10	21	20.707	24	24.293	45

Classification Table^a

			Predicted		
			CC2		Percentage Correct
			.00	1.00	
Step 1	Observed				
	CC2	.00	240	19	92.7
		1.00	138	17	11.0
Overall Percentage					62.1

\

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.027	.020	1.943	1	.163	1.028
	PRETOTAL	.153	.049	9.977	1	.002	1.166

SENTOTAL	.022	.027	.691	1	.406	1.022
UTOTAL	.007	.045	.026	1	.871	1.007
PERTOTAL	-.081	.052	2.403	1	.121	.922
Constant	-2.832	1.140	6.171	1	.013	.059

a. Variable(s) entered on step 1: IBTOTAL, PRETOTAL, SENTOTAL, UTOTAL, PERTOTAL.

CC3

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	45.752	2	.000
	Block	45.752	2	.000
	Model	45.752	2	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	412.012 ^a	.105	.156

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3.983	8	.859

Contingency Table for Hosmer and Lemeshow Test

		CC3Situation = .00		CC3Situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	23	21.199	17	18.801	40
	2	18	15.830	23	25.170	41
	3	13	13.434	28	27.566	41
	4	10	11.245	29	27.755	39
	5	9	10.469	33	31.531	42
	6	5	8.691	36	32.309	41

7	8	6.779	30	31.221	38
8	6	5.928	36	36.072	42
9	5	4.107	36	36.893	41
10	3	2.320	46	46.680	49

Classification Table^a

Observed			Predicted		
			CC3Situation		Percentage Correct
			.00	1.00	
Step 1	CC3Situation	.00	13	87	13.0
		1.00	11	303	96.5
	Overall Percentage				76.3

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
IBTOTAL	.150	.027	30.962	1	.000	1.161
UTOTAL	-.024	.053	.205	1	.651	.976
Constant	-2.053	.609	11.382	1	.001	.128

a. Variable(s) entered on step 1: IBTOTAL, UTOTAL.

CC4

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step 1			
Step	21.004	2	.000
Block	21.004	2	.000
Model	21.004	2	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	551.530 ^a	.049	.066

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	7.753	8	.458

Contingency Table for Hosmer and Lemeshow Test

		CC4 = .00		CC4 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	29	27.152	13	14.848	42
	2	29	24.860	14	18.140	43
	3	22	22.275	19	18.725	41
	4	18	22.338	25	20.662	43
	5	21	20.270	20	20.730	41
	6	18	19.766	24	22.234	42
	7	15	17.570	25	22.430	40
	8	15	16.864	27	25.136	42
	9	19	14.134	22	26.866	41
	10	9	9.771	30	29.229	39

Classification Table^a

Observed			Predicted		
			CC4		Percentage Correct
			.00	1.00	
Step 1	CC4	.00	105	90	53.8
		1.00	76	143	65.3
	Overall Percentage				59.9

Classification Table^a

Observed			Predicted		Percentage Correct
			CC4		
			.00	1.00	
Step 1	CC4	.00	105	90	53.8
		1.00	76	143	65.3
Overall Percentage					59.9

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.064	10.837	1	.001	1.066
	UTOTAL	.040	.861	1	.353	1.040
	Constant	-1.843	15.074	1	.000	.158

a. Variable(s) entered on step 1: IBTOTAL, UTOTAL.

CC5**Block 1: Method = Enter****Omnibus Tests of Model Coefficients**

	Chi-square	df	Sig.
Step 1 Step	16.892	3	.001
Block	16.892	3	.001
Model	16.892	3	.001

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	555.400 ^a	.040	.053

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
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Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	16.892	3	.001
	Block	16.892	3	.001
1		6.172	8	.628

Contingency Table for Hosmer and Lemeshow Test

		CC5 = .00		CC5 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	23	25.705	18	15.295	41
	2	26	23.254	15	17.746	41
	3	22	20.890	17	18.110	39
	4	22	21.564	20	20.436	42
	5	21	21.056	22	21.944	43
	6	17	19.684	25	22.316	42
	7	21	18.653	21	23.347	42
	8	20	17.238	22	24.762	42
	9	10	14.817	31	26.183	41
	10	12	11.138	29	29.862	41

Classification Table^a

			Predicted		
			CC5		Percentage Correct
			.00	1.00	
Step 1	Observed				
	CC5	.00	98	96	50.5
		1.00	72	148	67.3
Overall Percentage					59.4

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.070	.018	15.403	1	.000	1.073
	PRETOTAL	.028	.046	.380	1	.538	1.029
	PERTOTAL	.033	.050	.423	1	.516	1.033
	Constant	-2.375	1.007	5.566	1	.018	.093

a. Variable(s) entered on step 1: IBTOTAL, PRETOTAL, PERTOTAL.

CC6

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	2.243	3	.523
	Block	2.243	3	.523
	Model	2.243	3	.523

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	218.072 ^a	.005	.013

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3.759	8	.878

		CC6 = .00		CC6 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	40	39.007	1	1.993	41
	2	37	38.689	4	2.311	41
	3	40	38.503	1	2.497	41
	4	38	38.347	3	2.653	41
	5	37	37.253	3	2.747	40

6	37	38.005	4	2.995	41
7	37	37.816	4	3.184	41
8	39	38.424	3	3.576	42
9	38	37.163	3	3.837	41
10	40	39.793	5	5.207	45

Classification Table^a

Observed			Predicted		Percentage Correct
			CC6		
			.00	1.00	
Step 1	CC6	.00	383	0	100.0
		1.00	31	0	.0
Overall Percentage					92.5

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
IBTOTAL	.032	.030	1.134	1	.287	1.032
PRETOTAL	.051	.083	.375	1	.540	1.052
PERTOTAL	-.079	.091	.755	1	.385	.924
Constant	-3.144	1.781	3.115	1	.078	.043

a. Variable(s) entered on step 1: IBTOTAL, PRETOTAL, PERTOTAL.

CC7

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

	Chi-square	Df	Sig.
Step 1			
Step	15.031	2	.001
Block	15.031	2	.001
Model	15.031	2	.001

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	168.245 ^a	.036	.100

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6.986	8	.538

Contingency Table for Hosmer and Lemeshow Test

		CC7situation = .00		CC7situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	8	6.958	33	34.042	41
	2	5	4.276	39	39.724	44
	3	3	2.830	34	34.170	37
	4	2	2.585	39	38.415	41
	5	1	2.224	42	40.776	43
	6	1	1.809	42	41.191	43
	7	0	1.289	39	37.711	39
	8	1	1.030	40	39.970	41
	9	2	.682	39	40.318	41
	10	1	.316	43	43.684	44

Classification Table^a

			Predicted		
			CC7situation		Percentage Correct
			.00	1.00	
Step 1	Observed				
	CC7situation	.00	0	24	.0
		1.00	0	390	100.0
Overall Percentage					94.2

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.144	.045	10.432	1	.001	1.155
	PRETOTAL	-.044	.096	.216	1	.642	.957
	Constant	.275	1.957	.020	1	.888	1.317

CC8

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	Df	Sig.
Step 1	Step	20.109	2	.000
	Block	20.109	2	.000
	Model	20.109	2	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	530.397 ^a	.047	.064

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	12.210	8	.142

Contingency Table for Hosmer and Lemeshow Test

		CC8situation = .00		CC8situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	31	32.629	11	9.371	42
	2	35	31.102	8	11.898	43
	3	25	28.251	16	12.749	41
	4	25	26.669	15	13.331	40
	5	20	22.577	15	12.423	35

6	26	24.993	14	15.007	40
7	33	24.648	8	16.352	41
8	22	23.161	19	17.839	41
9	20	21.434	21	19.566	41
10	19	20.537	31	29.463	50

Classification Table^a

Observed			Predicted		
			CC8situation		Percentage Correct
			.00	1.00	
Step 1	CC8situation	.00	233	23	91.0
		1.00	125	33	20.9
Overall Percentage					64.3

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a IBTOTAL	.062	.017	12.884	1	.000	1.064
PRETOTAL	-.061	.045	1.816	1	.178	.941
Constant	-1.120	.886	1.599	1	.206	.326

a. Variable(s) entered on step 1: IBTOTAL, PRETOTAL.

Appendix 7: Binary Logistic Regression- Predicting Impulse Buying Choice

CC1

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	24.816	4	.000
	Block	24.816	4	.000
	Model	24.816	4	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	321.348 ^a	.058	.103

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	4.419	8	.818

Contingency Table for Hosmer and Lemeshow Test

		CC1 = .00		CC1 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	40	39.169	1	1.831	41
	2	38	38.181	3	2.819	41
	3	38	37.607	3	3.393	41
	4	37	36.930	4	4.070	41
	5	34	36.306	7	4.694	41
	6	35	35.555	6	5.445	41
	7	38	35.469	4	6.531	42
	8	35	33.576	6	7.424	41
	9	29	31.788	12	9.212	41
	10	29	28.419	15	15.581	44

Classification Table^a

Observed			Predicted	
			CC1	
			.00	1.00
			Percentage Correct	
Step 1	CC1	.00	352	1
		1.00	60	1
Overall Percentage			85.3	

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
UTOTAL	.109	.060	3.360	1	.067	1.116
IBTOTAL	.038	.027	2.056	1	.152	1.039
PHYTOTAL	.116	.062	3.509	1	.061	1.122
NATIONAL(1)	.591	.303	3.802	1	.051	1.806
Constant	-5.367	.849	39.999	1	.000	.005

CC2**Block 1: Method = Enter****Omnibus Tests of Model Coefficients**

	Chi-square	df	Sig.
Step 1			
Step	42.674	6	.000
Block	42.674	6	.000
Model	42.674	6	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	504.845 ^a	.098	.134

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	8.515	8	.385

Contingency Table for Hosmer and Lemeshow Test

		CC2 = .00		CC2 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	36	35.509	5	5.491	41
	2	28	32.649	13	8.351	41
	3	31	30.385	10	10.615	41
	4	32	28.529	9	12.471	41
	5	30	27.080	11	13.920	41
	6	27	25.360	14	15.640	41
	7	19	23.397	22	17.603	41
	8	22	21.297	19	19.703	41
	9	20	18.689	21	22.311	41
	10	14	16.106	31	28.894	45

Classification Table^a

			Predicted		
			CC2		Percentage Correct
			.00	1.00	
Step 1	Observed				
	CC2	.00	221	38	85.3
		1.00	100	55	35.5
Overall Percentage					66.7

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.028	.019	2.133	1	.144	1.028
	PHYTOTAL	.208	.053	15.522	1	.000	1.232
	NATIONAL(1)	-.725	.233	9.681	1	.002	.484
	PRETOTAL	.120	.049	5.959	1	.015	1.128
	TEMTOTAL	.058	.060	.925	1	.336	1.060
	SOTOTAL	-.086	.049	3.081	1	.079	.918
	Constant	-4.000	1.103	13.162	1	.000	.018

CC3

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	75.364	5	.000
	Block	75.364	5	.000
	Model	75.364	5	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	382.400 ^a	.166	.249

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	13.683	8	.090

Contingency Table for Hosmer and Lemeshow Test

		CC3Situation = .00		CC3Situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	28	25.083	13	15.917	41
	2	18	18.177	23	22.823	41
	3	9	14.949	32	26.051	41
	4	17	11.888	24	29.112	41
	5	9	9.453	32	31.547	41
	6	9	7.462	32	33.538	41
	7	3	5.553	38	35.447	41
	8	2	3.902	39	37.098	41
	9	2	2.393	39	38.607	41
	10	3	1.139	42	43.861	45

Classification Table^a

Observed			Predicted		
			CC3Situation		Percentage Correct
			.00	1.00	
Step 1	CC3Situation	.00	26	74	26.0
		1.00	12	302	96.2
Overall Percentage					79.2

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.130	.030	18.996	1	.000	1.139
	PHYTOTAL	.098	.050	3.806	1	.051	1.103
	NATIONAL(1)	1.433	.284	25.437	1	.000	4.190
	PRETOTAL	.015	.057	.064	1	.800	1.015
	UTOTAL	-.001	.056	.001	1	.980	.999
	Constant	-3.494	1.302	7.197	1	.007	.030

a. Variable(s) entered on step 1: IBTOTAL, PHYTOTAL, NATIONAL, PRETOTAL, UTOTAL.

CC4 Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	55.909	7	.000
	Block	55.909	7	.000
	Model	55.909	7	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	508.041 ^a	.128	.171

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	6.820	8	.556

Contingency Table for Hosmer and Lemeshow Test

	CC4 = .00	CC4 = 1.00	Total

		Observed	Expected	Observed	Expected	
Step 1	1	34	32.335	7	8.665	41
	2	30	27.943	11	13.057	41
	3	25	24.581	16	16.419	41
	4	20	21.825	21	19.175	41
	5	17	19.870	24	21.130	41
	6	21	17.394	20	23.606	41
	7	14	15.319	27	25.681	41
	8	9	13.258	32	27.742	41
	9	11	11.227	30	29.773	41
	10	10	7.248	29	31.752	39

Classification Table^a

			Predicted		
			CC4		Percentage Correct
			.00	1.00	
Step 1	CC4	.00	114	77	59.7
		1.00	61	156	71.9
	Overall Percentage				66.2

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.076	.023	11.384	1	.001	1.079
	PHYTOTAL	.112	.046	5.816	1	.016	1.118
	NATIONAL(1)	-.901	.229	15.446	1	.000	.406
	PRETOTAL	.050	.048	1.067	1	.302	1.051
	UTOTAL	.030	.046	.441	1	.507	1.031
	TEMTOTAL	.007	.058	.014	1	.906	1.007
	REG	.104	.089	1.346	1	.246	1.109
	Constant	-3.754	1.114	11.351	1	.001	.023

CC5 Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	26.010	3	.000
	Block	26.010	3	.000
	Model	26.010	3	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	546.282 ^a	.061	.081

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9.567	8	.297

Contingency Table for Hosmer and Lemeshow Test

		CC5 = .00		CC5 = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	28	27.631	13	13.369	41
	2	20	24.313	21	16.687	41
	3	25	22.798	16	18.202	41
	4	27	22.062	15	19.938	42
	5	24	20.167	17	20.833	41
	6	15	19.443	27	22.557	42
	7	15	17.470	26	23.530	41
	8	14	16.197	28	25.803	42
	9	14	13.765	27	27.235	41
	10	12	10.155	30	31.845	42

Classification Table^a

Observed			Predicted		
			CC5		Percentage Correct
			.00	1.00	
Step 1	CC5	.00	105	89	54.1
		1.00	72	148	67.3
Overall Percentage					61.1

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.059	.017	12.046	1	.001	1.060
	NATIONAL(1)	.161	.209	.590	1	.442	1.174
	SENTOTAL	.078	.027	8.196	1	.004	1.081
	Constant	-2.255	.508	19.734	1	.000	.105

CC7

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	20.921	2	.000
	Block	20.921	2	.000
	Model	20.921	2	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	162.355 ^a	.049	.138

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	10.518	8	.231

Contingency Table for Hosmer and Lemeshow Test

		CC7situation = .00		CC7situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	7	7.463	31	30.537	38
	2	7	4.917	38	40.083	45
	3	2	3.454	41	39.546	43
	4	1	2.347	37	35.653	38
	5	0	1.959	43	41.041	43
	6	3	1.218	31	32.782	34
	7	2	1.261	43	43.739	45
	8	1	.717	38	38.283	39
	9	0	.415	37	36.585	37
	10	1	.250	51	51.750	52

Classification Table^a

Observed			Predicted		
			CC7situation		Percentage Correct
			.00	1.00	
Step 1	CC7situation	.00	0	24	.0
		1.00	0	390	100.0
Overall Percentage					94.2

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
IBTOTAL	.145	.044	10.850	1	.001	1.157
NATIONAL(1)	1.182	.520	5.170	1	.023	3.260
Constant	-.819	.925	.785	1	.376	.441

CC8 Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	26.148	7	.000
	Block	26.148	7	.000
	Model	26.148	7	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	157.128 ^a	.061	.171

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	6.098	8	.636

		CC7situation = .00		CC7situation = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	10	9.054	31	31.946	41
	2	4	4.244	37	36.756	41
	3	3	3.038	38	37.962	41
	4	2	2.281	39	38.719	41
	5	1	1.773	40	39.227	41
	6	1	1.373	40	39.627	41
	7	2	.979	39	40.021	41
	8	0	.662	41	40.338	41
	9	0	.398	41	40.602	41
	10	1	.197	44	44.803	45

Classification Table^a

Observed			Predicted		
			CC7situation		Percentage Correct
			.00	1.00	
Step 1	CC7situation	.00	1	23	4.2
		1.00	0	390	100.0
Overall Percentage					94.4

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	IBTOTAL	.144	.049	8.528	1	.003	1.155
	NATIONAL(1)	1.235	.552	5.009	1	.025	3.439
	PRETOTAL	-.070	.097	.512	1	.474	.933
	SENTOTAL	.046	.064	.510	1	.475	1.047
	TEMTOTAL	.151	.108	1.958	1	.162	1.163
	SOTOTAL	.003	.087	.001	1	.974	1.003
	UTOTAL	-.142	.099	2.035	1	.154	.868
	Constant	.173	2.191	.006	1	.937	1.189

a. Variable(s) entered on step 1: IBTOTAL, NATIONAL, PRETOTAL, SENTOTAL, TEMTOTAL, SOTOTAL, UTOTAL.